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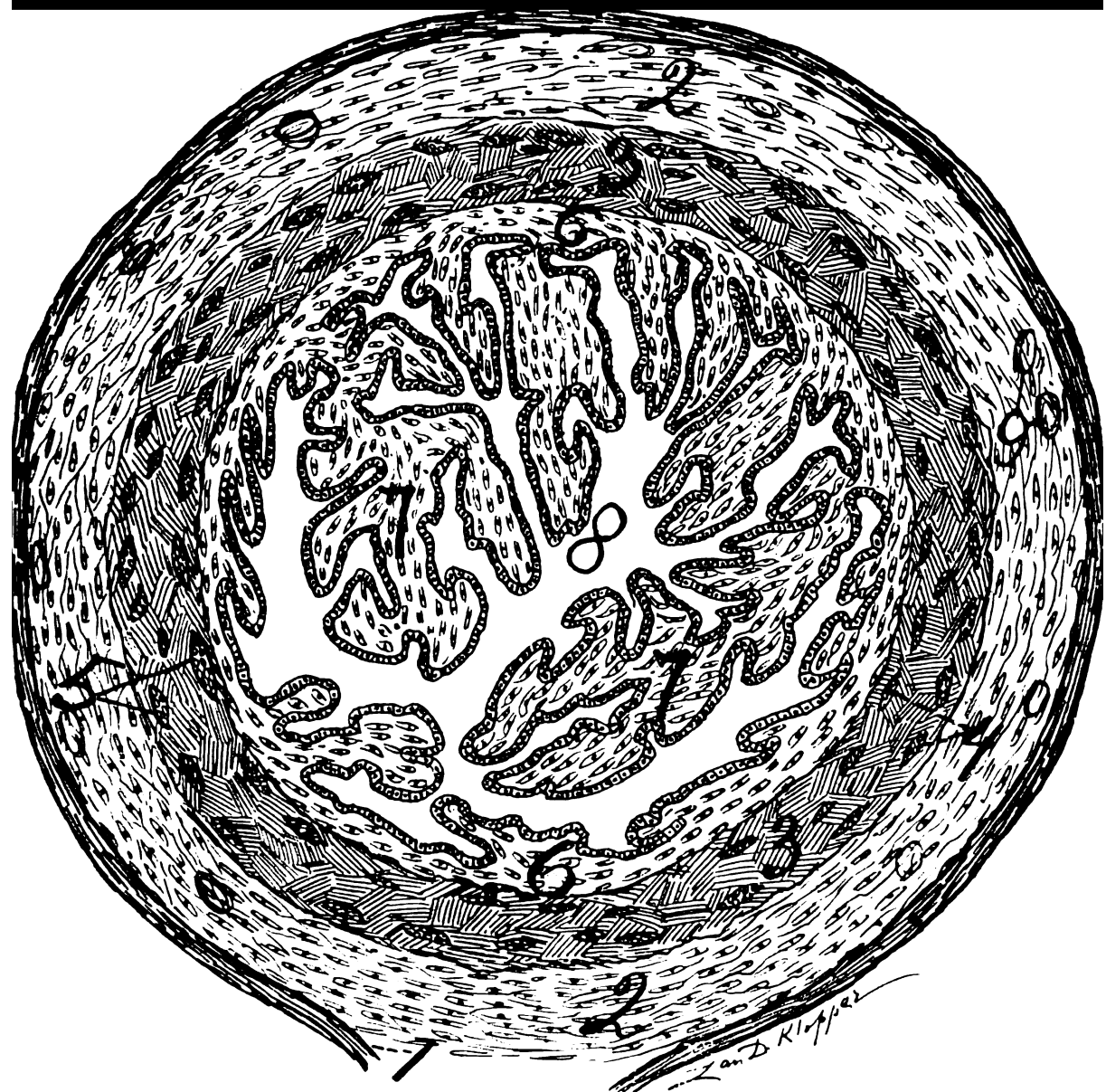
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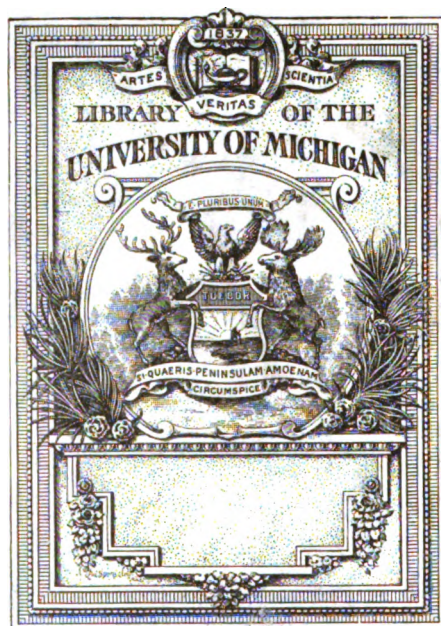
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Medical Era



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EDITED BY
CH. GATCHELL, M. D.

SURGICAL ERA

EDITED BY
CHAS. ADAMS, M. D.

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MEDICAL ERA

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NO. 1

PANCREATITIS.

Any practitioner of medicine, whether in city or country, whether having a large practice or a small one, is liable to come upon cases which are rare and unusual. The ordinary diseases which make up the greater part of the physician's practice—cases of grip, pneumonia, typhoid, measles, and the like—do not often present difficulties of diagnosis. But diseased conditions which are so rare in their occurrence that with many practitioners only a single case may occur in a lifetime of practice, or, with many, no case of the kind at all, usually tax the diagnostic skill of the most expert and experienced.

These remarks are especially true of diseases affecting the pancreas. This gland, not very large in size, is buried among surrounded organs and is inaccessible to the usual methods of physical examination. Functionally it is not of great importance. There is record of a case in which the entire pancreas was passed per rectum and the patient lived for seventeen years after. The uncertainties of diagnosis in disease of this gland may be appreciated when it is stated that according to a high authority there is record of only two cases of suppurative pancreatitis in which diagnosis was made prior to operation and opening of the abdomen. The correct diagnosis made during life is exceedingly rare.

An attack of suppurative pancreatitis is marked by three cardinal symptoms—(a) acute onset; (b) sharp radiating pains in the epigastric region; and, (c) excessive vomiting.

In addition to these symptoms there are elevation of temperature; constipation; tense abdomen; collapse.

The disease runs a rapid course, in the majority of cases terminating fatally within a few days. In other cases it may pass

into the chronic form, or, rarely, recovery may occur.

The symptoms of hemorrhagic pancreatitis are, as a rule, much more severe than those of the suppurative form; the pain and tenderness in the epigastrium are greater; the nausea and vomiting are more violent; the pulse is weak and fluctuating; tympanites is marked.

There is no pathognomonic symptom. Glycosuria is rare. Steatorrhea is not a constant or reliable sign.

The diseased condition with which pancreatitis is most liable to be confounded is, in most instances, intestinal obstruction. Others are perforation of the stomach, gastro-duodenitis, and poisoning.

Intestinal obstruction is rare in the epigastric region; it has as a symptom fecal vomiting; the tympanites is more extensive than in pancreatitis, and there is liable to be circumscribed distension of intestinal coils.

The other conditions mentioned have characteristic symptoms which should serve to distinguish them.

This brief review of the subject of pancreatitis is intended only as a reminder to the practitioner that in acute attacks marked by severe pain in the epigastrium and violent vomiting he should canvass the possibility of the case being one of pancreatitis.

If diagnosis should be made, operative measures are indicated.

NEW HOSPITAL.

The opening of the new hospital of the Homeopathic Department of the University of Michigan is an event of more than local interest. It is the only large hospital of our school connected with a State institution. It insures the perpetuity of the school at Ann Arbor, and it guarantees ample clinical teaching facilities.

ORIGINAL ARTICLES

THE UREMIA OF ELDERLY MEN.

BY CLIFFORD MITCHELL, M. D.

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The writer has seen certain cases in which old men have died either comatose or in convulsions without much previous indication of this particular termination of their case.

All of them, so far as known, were sufferers from enlarged prostate and cystitis, but the prostatic trouble was not necessarily more severe than in other patients, who as yet show no uremic tendencies.

It is difficult to discover the actual cause of the uremia in some of the cases or even to determine with exactness just when it sets in. It may steal upon the patient in a most insidious way, and is not likely to leave him when once it has become established.

Pyelonephritis, terminating in profound coma, is undoubtedly the ultimate cause of death in a large number of prostatic cases, according to Goodhart in 74 per cent; again, hydronephrosis with resulting chronic interstitial nephritis is the cause of uremia in other cases. But the writer has seen cases in which no evidences of either of these lesions was demonstrable, while yet the patient slowly sank and died comatose.

In order to account for these more obscure cases the writer advances the following hypotheses:—

First, the likelihood of the existence of forms of chronic nephritis, not yet well-recognized, but which are intermediate between typical chronic interstitial nephritis and senile contracting kidney, forms in which uremia is a more prominent feature than the cardiovascular changes which we expect to see in typical chronic interstitial nephritis. We find in most cases of uremia in elderly men pale urine, of low specific gravity, more or less deficient in solids. Urea is not invariably decreased to a marked degree, but uric acid is almost always low. A trace of albumin is found which we commonly refer to the pres-

ence of pus in the sediment. Casts are usually absent until late in the case, when a few hyaline or pale granular casts may be found at times.

Inasmuch as various writers have insisted on the existence of forms of chronic nephritis intermediate between chronic interstitial nephritis and senile contracting kidney, it seems not unlikely that the uremia of elderly men which is not apparently due to pyelonephritis or to typical interstitial nephritis may be referred to some of these intermediate forms. If such a nephritis is present, it would naturally affect most seriously those whose skin and bowels were particularly inactive, and it is in old men with such a condition of the skin and bowels that the writer has observed chronic uremia most frequently.

Moreover, in cases of chronic pyelitis or cystitis eventually proving fatal interstitial changes in the kidneys are usually observed post mortem, and though perhaps in some the macroscopic change are not well marked, still a careful microscopic examination rarely fails to reveal interstitial change (Ralfe). The cause of this interstitial change is most commonly due to pressure on the ureters of the thick bundles of muscular tissue of an hypertrophied bladder. Pressure on the ureters causes increased urinary pressure in the kidneys and increased urinary pressure in the kidneys is known to be a cause of interstitial changes. It is possible, therefore, that in the cases referred to by the writer death from uremia is due to the existence of an interstitial disease intermediate between typical chronic interstitial nephritis of middle life without enlarged prostate and cystitis on the one hand, and senile kidney on the other. We expect to find in typical interstitial nephritis hypertrophy of the left ventricle, a high tension pulse, atheroma of arteries, and sometimes albuminuric retinitis. But in the cases referred to above the writer has not noticed these conditions, the clinical features being merely those of chronic uremia, together with urine of poor quality, showing the usual evidences of cystitis. In cases which die from pyelonephritis it is well known that we may find post-mortem evidences of

chronic interstitial nephritis intermixed with those of suppurative changes. The writer reasons, therefore, that patients with enlarged prostate and cystitis who die of uremia without the usual symptoms of pyelonephritis are killed by some form of interstitial nephritis, before pyelonephritis on the one hand or hydronephrosis on the other has set in.

A second hypothesis wholly different from the first, and which seems, in the light of our present knowledge, much less likely, is that the uremia is due either entirely or in part to actual absorption of urinary salts in the bladder itself from residual urine there. We know, for example, from the experiments of Ultzmann that under certain circumstances the bladder is able to absorb certain salts.

Ultzmann found that in some cases of bladder hemorrhages, if two fluidounces of a one and-one-half per cent solution of potassium iodid were injected into the washed-out bladder, iodine could be detected in the saliva fifteen minutes later. (*Vorlesungen ueber Krankheiten der Harnorgane*, Vienna, 1888.)

A slow absorption of small quantities of urinary salts might also be possible in an ulcerated bladder. Until, however, we know just what substances are responsible for uremic phenomena, we can not regard this hypothesis as even probable, but must relegate it to the domain of possibilities. Any argument in its favor would nevertheless be welcomed by the writer as of great interest.

Regardless, however, of theories as to cause, we cannot fail to notice that certain old men with enlarged prostate or with more or less cystitis and pyuria die from some sort of chronic poisoning which in a general way we call uremia. For some time previous to death the family and friends of a patient in this condition notice the change in him. They say, "The old man is failing — he is not what he used to be."

Dull headache, bodily and mental lassitude, and inertia predominate. The patient's face becomes expressionless and indifferent. He does not always know just where he is or what he is doing. He may wander about the streets for hours without definite purpose or accomplishment. He rouses when spoken to and

may reply rationally to questions put to him, but gradually sinks into stupor when left to himself. After a length of time varying in different cases, he becomes comatose, and all efforts to rouse him are then usually futile. In some cases agonizing headaches, rather than stupor, occur, and death is preceded by convulsions.

The problem of the therapeutic management of such cases seems to be difficult of solution and about the only hope to lie in persistent though gentle eliminative measures.

The accumulation of toxic products is persistent, so that efforts to get rid of them must also be persistent. When we find an elderly patient with obstruction to the free flow of urine, with a bad tongue, a bad breath, constipated bowels, a dry, harsh, inactive skin, who is voiding pale urine of low specific gravity, deficient in solids, especially in uric acid, and containing pus, whether or not we can satisfactorily make the diagnosis of renal disease, it is incumbent upon us to make constant effort to promote elimination. This is not always easy, for so-called vigorous measures may seriously weaken the patient. Removal to a more equable climate than ours, where he can have plenty of sunlight, and gentle exercise in the open air, followed by careful not too vigorous bathing and expert massage is to be recommended.

The writer has seen a number of drugs used in large and small doses in the various cases, but cannot report flattering results from any save in one or two instances where *Jaborandi* seemed to be of benefit. One elderly patient who five years ago was sinking into coma, being already in a condition where he could speak but a few words when roused, is now alive and in comparatively good health as a result of the prompt action of *Jaborandi*. Given in two-drop doses of the first decimal dilution every fifteen minutes, a welcome perspiration was obtained, following which the patient awoke from his stupor. This patient has, since recovery from the attack, kept out in the open air most of the year round, visiting the south in the winter and the northern summer resorts in the summer. He has not had in five years any recurrence of

uremic attacks. I am unable at the present time to find anything in his urine except the features of chronic cystitis, but at the time of the uremic attack albumin and tube-casts were easily found.

70 STATE STREET.

CHRONIC PULMONARY TUBERCULOSIS.

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TREATMENT.

Hemoptysis.

The first requisite is absolute rest in bed. The patient should not so much as talk, or raise an arm. He should be told not to try to restrain the flow of blood; but let it come as freely as it will. Have the room quiet, and no commotion or excitement on the part of those present.

Reassure the patient. Tell him that of itself the symptom is no more serious than any other one belonging to his condition, and that an untoward result is something unknown.

Give to the patient small bits of ice to hold in the mouth or to swallow.

Ligate the legs and arms, near the body, by means of flannel bands, or handkerchiefs. Bind only enough to obstruct the superficial venous flow, but not enough to affect the arterial pulse. Loosen the bands about every half hour, or sooner if pressure on a nerve or cerebral anemia demand. Place a hot water bag at the feet, while the ligatures are on the legs.

After the attack, still keep the patient quiet; let the meals be light, but more frequent, and of liquid food.

In order to restore the volume of the blood and also to keep up bodily temperature, give colonic injections of hot (105-120° F.) normal salt solution.

Do not permit the patient to remain recumbent too long after the attack of hemorrhage; it favors hypostatic congestion. In three days at least he should be up and walk about. Respiratory exercise and deep breathing are helpful.

HEMOPTYSIS—THERAPEUTICS.

ACONITE. — Bright red blood; incessant, hacking cough; warm feeling in the chest; red face; great anxiety; arterial excitement.

IPECAC. — Sensation of bubbling in the chest, followed by copious bleeding; tickling beneath the sternum; spitting of blood after the least effort; nausea.

HAMAMELIS. — Venous hemorrhage; blood dark, thin, coming into the mouth without effort, like a warm current.

MILLEFOLIUM. — Profuse flow of thin, bright-red blood; oppression; palpitation; not much cough.

CACTUS. — Hemoptysis, with overaction of the heart; secondary to heart disease; sensation of constriction.

VERATRUM VIR. — Violent congestion, with full, hard, bounding pulse.

PHOSPHORUS. — Hemoptysis occurring in the course of low fevers; also, inflammatory symptoms following an attack of hemoptysis. Tight feeling in the chest, with dry, tight cough, followed by hemorrhage.

FERRUM PHOS. — Hemorrhage of bright, red blood, occurring in the course of phthisis.

GERANIUM. — Bright, red blood; persistent, free flow.

SULPHURIC ACID. — Persistent hemorrhage of dark blood; quantity slight; a continuous oozing; in feeble and anemic subjects. Dose: — Ten drops of the C. P. acid in a glass of water; teaspoonful dose every hour.

HYDRASTIN HYDROCHLORATE. — In subjects of old bronchial catarrhs; with friable mucous membrane.

DIGITALIS. — Secondary to obstructive heart lesions; feeble action of the heart. This drug must be used with caution. Its free use favors separation of thrombi and pulmonary infarct.

CHIN. ARS. — For the anemia following excessive loss of blood.

Cough.

The irritable, dry cough of the early stage may often be allayed by such simple measures as sipping ice-water, or or-

ange-juice, or by the use of lozenges of slippery-elm bark. It is sometimes a habit-cough, when it may be controlled by effort of the will, or by holding the breath for a few seconds.

For relief of the hard morning cough, let the patient take a glass of hot water, with lemon-juice, and very little sugar.

Vomiting after coughing is generally due to mechanical disturbance of the stomach induced by the violent effort. In such case let the patient eat but a moderate quantity at a time, and rest quietly after eating.

For the almost incessant and distressing cough of the late stage, codeine is the most efficient palliative.

Insomnia.

Living in the open air all day, and free ventilation of the sleeping-room at night will do much to promote sleep. Other measures which will aid are: — Bathe the patient's feet in hot water, and rub dry with a crash towel; with the palm of the hand stroke the spinal column from the back of the neck downward; give a glass of buttermilk, or matzoon or of Koumiss.

Pityriasis Versicolor.

For this parasitic condition of the skin, first wash the part with warm water and soap. Then apply a solution of the hyposulphite of soda, one dram to the ounce.

Joint Tuberculosis.

This condition can occur at any stage of the disease. It is indicated by severe pain in the joint, and sometimes swelling of the overlying tissues. Bier's method of treatment, by ligature of the affected limb with elastic bands gives most relief. Apply on the limb, above the joint. Use a wide band. Do not bind too tightly — only enough to impede the venous circulation. The object is, not to produce anemia of the affected joint, but hyperemia and swelling. If the presence of the band creates intense pain, it must be removed. It should be applied several times a day, and kept, at first, from 10 to 30 minutes, increasing the length of time from day to day. Change the place of ligation on successive days. Give the joint rest.

THERAPEUTICS.

ARSENICUM IOD. — The most important remedy in incipient phthisis, especially when there is rapid loss of weight. Fever; cough; dyspnea; mucopurulent expectoration; prostration; diarrhea.

PHOSPHORUS. — Especially in phthisis following pneumonia. Adapted to tall, thin, "hollow-chested" subjects. Symptoms: — Dry cough; soreness in the larynx and trachea; long-continued hoarseness; pain in the stomach after meals; diarrhea, especially after meals; palpitation; blood-streaked sputum; sweats; loss of strength; emaciation; pale skin.

KALI CARB. — Sharp, stitching pains in the chest; cough dry, or with scanty expectoration; or, in advanced cases, profuse expectoration, with sharp stitching pains.

IODINE. — Tuberculosis in those of previously "scrofulous" habit; enlarged lymph-nodes; fair skin; persistent, short, hacking cough; night-sweats; morbid appetite; fever.

IODIDE OF ANTIMONY. — It may with advantage be substituted for Iodine.

FERRUM PHOS. — Of use only in the early stages. Exacerbation of the pulmonary condition from exposure; congestion of the lungs, with blood-stained expectoration.

NUX VOMICA. — For the digestive disturbances, sometimes a prominent symptom in phthisis; morning headache; sour or bitter taste; vomiting, or violent retching; gastralgia; constipation, with ineffectual urging.

STRYCHNIN. — With the symptoms of indigestion, as for Nux vom., Strychnin often has prompt action.

BAPTISIA. — As an intercurrent remedy, late in the disease, when there is fever; morning chills, followed by fever and perspiration; anorexia.

STANNUM. — Cough attended by profuse, greenish or mucopurulent expectoration; hectic and emaciation; coarse rales; soreness in the chest after coughing; sense of weakness in the chest; talking causes fatigue; expectoration sweetish in taste.

CALCAREA CARB. — In incipient phthisis, in those of fat and flabby flesh; inability to take fat food; acid eructations; "acid dyspepsia"; free perspiration; rapid emaciation; loose, rattling cough; soreness of the chest, which is painful on pressure; persistent hoarseness; diarrhea; amenorrhea.

BRYONIA. — Sharp pleuritic pains, with accompanying fever.

SILICEA. — The presence of cavities; profuse expectoration of pus or muco-pus; fever and profuse sweat.

ARSENICUM. — In advanced cases, with fever, anxiety and restlessness; diarrhea, due to intestinal ulceration.

ARSENIATE OF QUININE. — In advanced cases, with the condition described under Arsenicum, this will have a "tonic" effect, rendering the patient's state more comfortable.

CUPRUM ARS. — Cramps in the abdomen, with vomiting and diarrhea, following stomach disturbance.

AGARICIN. — For the night-sweats of phthisis. Dose: — One-grain tablet at bedtime; sometimes necessary to give two or three doses during the latter part of the day and in the evening.

PHOSPHORIC ACID. — Feeling of weakness in the chest; cough with feeling of tickling under the sternum; muco-purulent expectoration; night-sweats.

PILOCARPINE. — Profuse sweats occurring in the course of acute phthisis.

ATROPINE. — In extreme cases, to check the exhausting sweats. Atropine may be used as a palliative; it is not curative in its action. Dose: — One one-hundredth of a grain, by hypodermic injection, given at bedtime.

ACONITE. — For slight hemoptysis occurring in the early stages, with fever and excitement of the circulation.

ANTIMONIUM IOD. — Fever; cough, with profuse muco-purulent expectoration.

FERRUM ARS. — In cases with marked anemia; pale skin, and lips; in females, amenorrhea.

REPERTORY.

COUGH. — Phosphorus; Nitric acid; Stannum; Hyoscyamus; Belladonna.

NIGHT - SWEATS. — Agaricin; Phos. acid; Arsenicum; Cinchona; Silicea; Atropin.

FEVER. — Arsenic iod.; Baptisia; Ferrum phos.; Chin. ars.; Silicea.

DIGESTIVE DISORDERS. — Nux vom.; Strychnin; Arsenicum; Cuprum ars.; Ferrum ars.

PAIN IN THE CHEST. — Bryonia; Aconite; Kali carb.; Cimicifuga.

INSOMNIA. — Caffein; Digitalis.

HEMOPTYSIS. — Millefolium; Phosphorus; Ferrum phos.; Acalypha.

THE USE OF TUBERCULIN IN THE DIAGNOSIS OF INCIPIENT PHTHISIS.

BY GEO. L. BROWN, M. D.
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The striking success of diphtheria antitoxin has stimulated serum-therapy to such a degree that now a flood of serums are advocated for all known infectious diseases. While there is little doubt that the use of bacteria in medication, whether in bacterio- or serum-therapeutics, is a rational procedure, and that the laboratory reports of Paine's pneumococcus, the typhoid and other serums are encouraging, yet next to antitoxin tuberculin claims our attention as an agent which is both bacteriolytic and antitoxic, and has passed beyond the laboratory limits into clinical hands for practical application.

The subject of tuberculin mainly interests us at present in relation to its local action on tuberculous tissue, aiding the diagnostician by the reaction induced to localized tubercular foci.

Symptomatically speaking, the emaciation, nocturnal hyperhidrosis, anorexia, hectic flush, cough and expectoration, should be erased from the pages of our works on diagnosis, and, as far as tuberculosis is concerned, replaced by symptoms more compatible with life.

To stimulate and encourage early diagnosis the classification of pulmonary tuberculosis on a histo-pathological basis, as taught by Holmes of Denver, seems rational.

The first stage, or pre-tuberculous, exhibits no essential lesion, probably not even the tissue-necrosis which precedes the actual tubercular inflammation, but presents a favorable soil for the bacilli.

The second stage, or pre-bacillary, the bacilli are present in the various foci, but there is not sufficient tubercular bron-

chionitis or pulmonary vesiculitis to cause an expectoration containing bacilli.

The third stage shows a greater advance of the conditions which began to be established in the preceding stage, and now the bacilli can be demonstrated in the sputum; this is termed the bacillary stage.

The last stage in the histological classification is the first stage generally recognized by the practitioner using the ordinary methods of diagnosis.

According to Anders of Philadelphia the second, or pre-bacillary stage, is of longer duration than generally supposed. He calls attention to the fact that a thermometric observation during this particular period will show a daily rise of a degree or more, the maximum of the curve occurring in the afternoon. Sidney Ringer of London in 1866, in a paper read before the members of the London University Medical College, called attention to the superiority of early thermometric observation in pulmonary tuberculosis as a means of early diagnosis when the other methods of physical examination then in vogue showed nothing positive.

Recent observations limit the value of the early temperature chart in this particular affection by tending to show that a thermic elevation occurs in other conditions that present a closely allied clinical picture to incipient tuberculosis; for instance, varieties of chlorosis and secondary anemias.

We would infer from the pathology of the bacillary stage that extensive tubercular infiltration had already taken place, when the exudation due to bacterio-toxic inflammation of the air vesicles, or the mucosa of the bronchioles, was sufficiently established to result in an expectoration containing the bacilli.

This is particularly so in a certain class of cases in which the primary manifestation is a peri-bronchial lymphadenitis which leucocytic endeavor fails to control, the process, after a long interval, reaching the mucosa and finally the bacilli expectorated through bronchial channels.

It can be readily seen, however, that gland caseation and extensive tissue de-

struction can progress to an alarming extent before the sputa become suggestive.

Much interest has been aroused as to the probable nature of the tuberculin reaction, numerous writers advocating as many different theories, notably that of Koch, who held that the resulting phenomena occurring after the injection of a c. cm of tuberculin were due to a direct necrotic action of the agent on the nodes containing the tubercular deposit, thereby inducing the characteristic temperature curve and general temporary exaggeration of all the symptoms present.

The acceptance of Koch's theory has given rise in many instances to the assertion that tuberculin is a toxin only, and absolutely devoid of antitoxic powers; making it applicable to diagnosis only; to which admittedly at the present time its use is largely limited.

However, since the researches of Cabot and Trudeau have been published, it would seem that, in addition to the primary effect, there is a prolonged secondary effect, which they conclude is antitoxic in nature. Furthermore, the question as to whether the agent is a toxin or antitoxin should not be argued on its probable *modus operandi*, as heretofore, but preferably on the general systemic result. If the agent combats the systemic intoxication arising by absorption from tubercular foci, it should make no difference how the sepsis is overcome, so far as endeavoring to classify the agent is concerned.

In this connection I do not wish to avoid the statement recently made that there can be no antitoxin for tuberculosis because the disease is not self-limiting, therefore producing nothing which can limit it. In reply, I would say that this idea has been modified by further investigation and research; and furthermore is open to the objection of considering pulmonary tuberculosis and pulmonary phthisis as synonymous, while in reality there is a hard-and-fast clinical line separating the two conditions.

Phthisical cases always have an extensive systemic intoxication, due not only to the tubercle bacilli but to pyogenic organisms as well. A mixed infection is never present in simple tuberculosis, and

the great danger in the latter condition is that of having a superadded pyogenic infection.

When the latter occurs the condition is certainly not self-limiting. On the other hand it is quite a frequent occurrence, at a post mortem examination made on subjects dying from other disease, to find an old healed tuberculosis, showing conclusively that a simple tubercular manifestation, under certain conditions, is obliterated either by cicatrization, or is sufficiently walled off to prevent further extension.

The role played by tuberculin in producing the characteristic temperature after injection into the human organism can best be presented by citing Hahn's explanation modified somewhat by later deductions.

When the injected material reaches the bloodmaking organs an extensive leucocytosis is induced. This primary effect is conclusively shown in all this series of cases by the blood examination.

The particular variety of cells increased are the polymorphonuclear and those of an eosinophilous variety. The latter are actively phagocytic, which is probably due in part to the histological structure of the cell, the protoplasm being coarse and loosely constructed, better adapting the corpuscle to ameboid motion, which is necessary in picking up and ingesting certain irritants and foreign bodies, for which it has peculiar affinity.

The polynucleated variety also has the function of phagocytosis but to a less extent than the eosinophile.

The increase in the variety of cells just mentioned must not be confounded with the great number of lymphocytes, sometimes present under certain conditions, and which are feebly phagocytic.

The rise in the leucocyte count is accompanied by a steadily thermic elevation. This varies according to the kind of infection present; in simple tubercular case the fastigium of the curve reaching 102°; in phthisical cases the maximum rise is often as high at 105° F.

Hahn further states that the fever is not due, as Koch suggested, to direct necrotic action on the tubercle; but to the combination of the tuberculin with the essential principle of the white cell, name-

ly, the nuclein. We know also that nuclein can alone produce fever when absorbed, as shown by the so-called post-operative rise occurring after surgical interference, which we formerly attributed to absorption of fibrin ferment; but which in reality is due to absorption of nuclein set free by the white cells undergoing disintegration at the site of wound or trauma. But the nuclein fever is not so high as that produced by the administration of tuberculin.

To further state that the increase of the white cells aids in the function of defense would be a repetition of a statement made by Metchnikoff years ago, but which in the recent light of blood analysis seems more probable than ever. However, it is not to be inferred that a single injection for diagnostic purposes stimulates reparative action at the site of tuberculi foci, as tubercular lesions in the lung parenchyma never heal by resolution, but by cicatrization resulting from a gradual fibrosis, the foci being obliterated by contraction of the scar tissue; in other organs fibrosis is stimulated by a long-continued hyperemia, which means an effusion of white cells at that particular point. By analogy it would be fair to conclude that tuberculin administered over a long period would stimulate fibrosis about tubercular lesions, provided the patient could survive the frequent dosage, which undoubtedly is the case where the lesion has not passed over the border line into a phthisical state.

In the latter condition it is positively dangerous to administer the agent, as the system is impaired by severe intoxication, and we know that the tubercle bacilli are very resistant, due to the fats and irritant nucleo-bodies which they contain. Should the leucocytic endeavor fail, instead of inducing a fibrosis about the lesions a dissemination of the disease throughout the system would occur, the cells carrying the bacilli away from the foci and later making a deposition of the living bacillus in some other situation, the cell dying from the toxin, which it failed to neutralize. Furthermore, a patient in such an advanced condition could not stand frequent repetition of the agent, the reaction being too severe. After the administration of a cm. of tuberculin to

a case, who was in a hopelessly advanced condition, the physical signs were exaggerated to such an extent that they resembled those present in an acute pneumonia. The temperature, which prior to the injection had a daily maximum rise to 100° , bounded up to 105° , from which point it slowly receded by lysis during the reaction. The patient complained severely of irritating cough, profuse sweats, headache and increased prostration.

In the simple tubercular cases the reaction, though typical, even when physical signs are obscure, does not produce much disturbance beyond transient feeling of lassitude and slight headache, which, however, disappears in eight to twelve hours, leaving no bad effect.

After the injection the temperature should be taken hourly, or one-half hourly record shows the steady ascent still better. As stated before, in incipient cases it rarely goes above 102° , the pulse showing the usual parallel ratio. Considerable attention has been called to a corresponding rise in arterial tension during the period of reaction, but sphygmographic observation on a number of the series failed to show anything significant; in fact, except the rapidity the tracings were typically normal. As to the probable antitoxic effect, the experience of Petursch is valuable in showing the necessity of repeated injections of tuberculin, with long interruptions, in order to obtain the absence of reaction susceptibility to test doses. The latter he regards as a criterion of complete cicatrization of all the tubercles. If after several injections the reaction is as typical as the primary one, the physiological defense or walling off of the foci by fibrosis has not been accomplished, and the absorption still continues. Whether or not tuberculin of any sort should be favored for limited therapeutic use I will not attempt to decide, but having presented the possibilities in that line I will cite a few cases from the series, which show conclusively the value of the agent in diagnosis.

Case I. Louisa Anderson, age 31, admitted to Ward XXIV June, 1900. Admission diagnosis, neurasthenia. Patient complaining of indigestion for four months. Family history negative; personal history, up to age of 19, negative,

except for measles and chicken-pox in childhood; at age of 19 had an acute articular rheumatism; made good recovery. Since then, with the exception of transient headaches, has always been well until four months ago, when she complained of a feeling of debility. Later, considerable anorexia, and dull frontal headache developed. Prior to this time could endure considerable physical exertion; now notices slight difficulty in breathing or attempting usual routine house duties; some nausea, with inclination to emesis after eating, but no actual vomiting; was habitually constipated; had lost four pounds since inception of present trouble; no cough or expectoration complained of.

Examination:— Patient does not appear emaciated or cachectic; no enlarged lymph nodes; no edema; development fair; musculature below standard; appears as if atrophied; skin rather pale, but mucous membranes a deep red; tongue broad, flabby, covered with a white deposit; sclera shows a subicteric hue. Thorax long and flat; width fair; epigastric angle wide; expansion fair; breathing symmetrical; excursion of diaphragm noted bilaterally; no particular exaggeration of supra- or infra-clavicular fossae. Percussion over anterior chest, bilaterally, showed no apparent change in resonance, and was equally good posteriorly. Auscultation over apices and supra- and infra-clavicular fossae:— Murmur, cog-wheeled in rhythm; ratio of inspiratory to expiratory murmur apparently not disturbed; the vesicular element showing no deposit in any area to assume a bronchial character; but, on the other hand, over the right apex presented an apparent diminution in sound; this, however, would disappear for a considerable length of time after a brisk breathing exercise, returning when respirations became quiet. Posteriorly and laterally, murmur after repeated examination was shown to be transiently cog-wheeled; the interruptions never assuming a constant character; and occasional sub-crepitant rale detected over the area of large bronchial tube; no rales present over the lung parenchyma.

Heart apex at normal site; tones clear

and without accentuation over base. Abdomen, slight tenderness to pressure over epigastric quadrant; no increase in hepatic or splenic dullness, nor were they palpable at the costal arch. Genito-urinary examination negative.

The superficial reflexes generally were exaggerated; and hyperaesthetic areas present in the skin over the back and chest.

Blood 4,500,000 red; whites 7,500; hemoglobin 75 per cent. No differentiated.

Urine normal; no diazo-reaction present. The patient was put to bed on milk diet. The temperature record showed an intermittent fever from 97.6 to 100.8°, the maximum rise occurring in late afternoon. Ammonium chloride was given to induce expectoration; in the scant sputum obtained no T. B. were present; a frequent repetition failed to discover any. On the fifth month, twenty-fourth day: Stomach contents after test meal, HCL absent; lactic present; total acidity not estimated.

After enough time elapsed to secure a reliable temperature chart, a cm. of tuberculin was administered. A characteristic reaction was obtained. Diagnosis of incipient phthisis made.

On leaving the hospital the patient was advised to send sputum for further search, and July 14 a small sample was received which contained numerous tubercle bacilli. No elastic tissue present. I immediately notified the patient to call at the hospital as soon as possible; she responded in about a week. An examination over the right apex showed the vesicular murmur replaced by one of a broncho-vesicular character, and slight dullness could now be detected. She stated that since leaving the hospital she had caught cold, and in addition to the cough had considerable expectoration. I instructed her to let me know of her condition at least once a month, but she failed to do so.

The importance of gastric symptoms in early phthisis is well illustrated in this case, and I may say in all tubercular cases careful attention to details in taking the history is important. However, notwithstanding much stress is laid on the history, it would be better to take none at all than to use it as negative evidence.

Case II. Lizzie Beltzore, age 23, civil

state, married; has been complaining for six months; her physician explained in a letter sent with the patient that she had a general catarrh of the stomach and bowels.

Family history negative; personal history negative until six months ago, when an abortion was performed, as she stated, for uncontrollable vomiting. Soon after a cough developed with scant muco-purulent expectoration. The latter, however, disappeared to a certain extent, but the cough persisted. She considered this of minor importance as compared with the loss of appetite and gradual feeling of prostration which insidiously developed. She complained often of flatulent distension of the stomach after ingestion of food; was habitually constipated, and cathartics were freely taken. Careful cross-examination as to further symptoms elicited practically nothing more than the above.

Physical examination:—Development fairly good; subcutaneous fat in moderate amount; pupils react readily both to light and accommodation, but appear dilated to an unusual extent; the pupillar consensual reaction is also readily obtained; tongue clean at the top but heavily coated at the extreme base; mucous membranes red and moist; skin moist, pliable, and over the malar eminences somewhat flushed; no enlargement of lymphatic nodes in triangles of the neck; chest expansion performed easily, the chest surfaces rising symmetrically; excursion of diaphragm readily seen; depression at the site of the supra-clavicular fossae somewhat exaggerated.

Auscultation:—The normal vesicular murmur present over the lung parenchyma proper, but on approaching the larger bronchial tubes assumed a bronchial type. Slight prolongation of the expiratory murmur over the left apex; no interruption to rhythm; no rales detected. On percussion, resonance good over the entire chest corresponding to lung tissue.

Heart:—Area of pericardial pulsation rather large, but apex at normal site.

Anscultation:—Slight systolic blowing murmur over the base; murmur strictly localized, with no tendency to propagation in any direction; second

pulmonic sound somewhat accentuated; apical tones clear and distinct.

Abdomen:—Tenderness on pressure over the epigastrium; no visual enlargement evident to the palpating hand.

Genito-urinary organs negative. Axillary epitrochlear inguinal glands not enlarged.

The patient was placed on liquid diet until thermometric observation was completed, the latter shows a daily rise of from one to two degrees.

Free exhibition of ammonium chloride aided the expectoration considerably, examination showing an abundance of staphylococci and desquamated bronchial epithelium, but no tubercle bacilla present.

Later injected a cm. of tuberculin under strict asepsis; an initial rise from 99° to 102° followed within four hours after the administration.

The patient was advised to seek a more suitable climate, but circumstances of a financial character keep her in the city until three months later, when she was readmitted to the Hospital on the allopathic service. She had all the clinical signs of a pulmonary tuberculosis. I was unable to examine her personally but the interne in charge kindly submitted a specimen of sputum which showed the Koch's bacilli present.

Without detailing the other cases I will conclude by stating that out of the series of twelve incipient cases five were diagnosed in the pre-bacillary stage by the tuberculin reaction; two of the five later showed the bacilli present; the other three later showed the bacilli present, but so soon after the reaction from tuberculin that they are open to the objection which might be raised that the search for the bacilla was not repeated often enough; or they would have been found earlier. However, personally, I am satisfied that no tubercle bacilli were present, as a most diligent repetition of examinations with good technique, failed to demonstrate them in the sputum.

Of the other seven cases five are still under observation and as yet no bacilli have been found. The other two cases have since passed into a phthisical state and died.

SELECTED

From the "Chironian."

THE HOMOEOPATHIC THERAPEUTICS OF TYPHOID FEVER.

WITH SPECIAL REFERENCE TO THE VARIOUS STAGES OF THE DISEASE AND THEIR COMPLICATIONS.*

BY WILLIAM H. DIEFFENBACH, M. D.
NEW YORK.

Prodromal Stage.

Gelsemium.—In reviewing the prodromata of typhoid fever the drug most vividly portrayed is often found to be Gelsemium.

Here there is a sense of extreme prostration, muscular weakness and venous congestion; the face being red and suffused, eyelids heavy, pupils dilated, with photophobia, and a general tired, drowsy feeling. There is dull pain or a strange feeling in the head or they may have severe occipital headache (better by profuse micturition) and the patient feels sore all over. The fever, if present, is usually without thirst, with evening exacerbation, pulse full and weak and may have chills which run down the spine. Dark yellow stools may also be present. In bed the patient lies perfectly quiet, seemingly dreading to move and twitchings of the muscles are also noted. This drug, if given in the initial stage, when not aborting Typhoid fever, will so modify the attack as to make the course of the disease a very mild one.

Baptisia.—Baptisia is by many observers believed to be the true similitum of typhoid, as the symptoms produced by it on the healthy very closely resemble this disease.

There is an uneasy feeling, with chills at day and heat at night, the temperature becomes high, the pulse being quick, full and soft and in direct proportion to the intensity of the fever. Lassitude, stupefying frontal headache, feeling as if the head was enlarging, heavy but restless sleep, dry tongue coated yellow or brown with red edges, bad taste in the mouth, flushed, besotted looking face, congested eyes, photophobia, pain in back of neck, tenderness in the ileo-caecal region, slight tympanites and yellow or dark colored,

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very offensive diarrhoea complete the picture presented in the attack.

Baptisia in later stages.—Later in the disease in the second or third week, *Baptisia* exhibits a muttering delirium or stupor, the patient falls asleep answering questions; puts out his tongue and forgets to put it back, the tongue becomes brown, looks as if burnt, the breath is offensive, the teeth covered with fetid sordes and all the discharges are very offensive. The patient feels as though he was scattered about and grasps about him to replace his parts; his sleep being restless, tossing about to find a soft spot, the bed sores and petechiae tending to increase his uneasiness. This drug is, by many, given preference over all others—the mental peculiarities, besotted face and excessively offensive discharges with other characteristic symptoms leading to its choice.

Bryonia.—Another drug often indicated in the early developmental or prodromal, as well as in later stages of the disease is *Bryonia*.

Prodromal and Later Stages.

Several days before the attack the patient experiences sharp, shifting pains and a feeling of great weakness and tiredness. Later the face becomes red and suffused, fever comes on, with pulse full, hard and wiry, with dry cracked lips; may have the characteristic thirst for large gulps of water; epistaxis, dry cough, chilliness better from cold, worse in a warm room; digestive disturbances with coated, whitish tongue which later on becomes brown and parched, with bitter taste in the mouth. There is the throbbing frontal headache with photophobia, pain as if head would split, worse on slightest motion, nausea on sitting up in bed, lassitude and drowsiness—prates about his business. This is one of the quiet drugs; motion seems to aggravate all symptoms.

Bryonia also has the tender abdomen with slight tympanites and is particularly indicated when associated with constipation; with the advent of diarrhoea its clinical success seems to be limited.

Rhus Tox.—*Rhus Tox*, in contradistinction to *Bryonia*, is a restless drug—the pains and uneasiness evidently being improved by continual motion.

Here there is headache, better by epistaxis; delirium of a "mild," muttering character, depression of spirits, the patient cries readily and feels sore all over. The mouth is dry with persistent thirst for cold drinks, especially cold milk. The *Rhus* tongue is distinctive, being coated whitish, with a red triangular tip, red edges and raised papillae. Later on there is respiratory irritation; bronchitis or pneumonitic complications may supervene; also, red vesicular eruptions, and offensive diarrhoea containing much mucus or appearing like the washings of meat. The discharges are not as fetid or offensive as in *Baptisia*, and may be involuntary in later stages, the urine also becoming involuntary and albuminous. Tremor and twitchings of the muscles are also noted. The key-notes for the choice of this drug are: Restlessness, feels better from motion, the characteristic tongue, tremor, involuntary discharges of urine and faeces and respiratory complications.

Another remedy indicated when the disease is established, particularly in the initial stage, is *Belladonna*.

Belladonna. 1st Stage.—This drug presents the characteristic arterial excitement with throbbing headache, flushed, red, burning face, with dilated pupils, high fever with full, bounding pulse, skin hot and dry and extremities cold. Sleep is heavy and disturbed, often accompanied with furious delirium, full of fear and dreading some calamity. There may be screaming out during sleep and twitchings of the muscles. The pains of *Belladonna* are shifting and intense, with little or no aching or prostration such as is found in *Gelesmium*, and the aggravations are usually noted at 3-6 p. m.

Stramonium. 1st Stage.—*Stramonium* with *Belladonna* and *Hyoscyamus* forms the so-called "trinity" of remedies found useful in active or arterial delirium and may be indicated in the first stage of the disease. The delirium is boisterous and comical, the patient sees snakes or insects all over the room and tries to escape; it is not as violent as that of *Belladonna*, being midway in intensity between it and the milder *Hyoscyamus*. The delirium is accompanied by fear and alternates with tetanic convulsions; there is meteorism and may have constipation or blackish,

very offensive diarrhoea every few hours and the urine may be suppressed or discharged involuntarily.

Ipecac Prodromal, 1st and 2d Stages.—*Ipecacuanha* may sometimes be indicated in the prodromal and the first or second stages of Typhoid fever. The fever is mild—short chill, and long fever, accompanied by nausea and vomiting. There is a bruised feeling, bursting headache, sweat upon the head, clean tongue, or may be slightly coated, the prostration being sudden and accompanied with *subtus tendium*. The diarrhoea is aggravated in the evening, may be greenish, "green as grass," or yellowish, containing greenish mucus and sometimes blood and accompanied by colicky pains about the navel—nausea and vomiting being concomitant with most conditions.

Arnica, 1st, 2d or 3d Stages.—A remedy having many symptoms similar to *Baptisia* is *Arnica*. It may be indicated early in the disease but is usually most efficacious in the second and third stages.

The *Arnica* picture of Typhoid fever presents a passive congestion of the brain with drowsiness or stupor, the patient often falling asleep answering questions; the head is hot and the rest of the body cool, this characteristic with the other typical *Arnica* symptom bruised feeling all over will often suggest its use. This bruised feeling causes the patient to shift around in bed, seeking a soft place to ease his suffering. *Arnica* also presents the dry, brown tongue, the ecchymoses and the foul, often purulent diarrhoea found in Enteric fever, the stool often containing much mucus or blood.

In the second or third stages *Arnica* is indicated when the venous stasis becomes pronounced with threatening apoplexy; the patient is in a state of collapse, the breathing becomes heavy and labored, the discharges involuntary and almost complete inco-ordination of muscular power prevails and characteristic black and blue, irregular ecchymoses, may be found all over the body.

1st and 2d Stages, Echinacea Augustifolia.—This new remedy comes highly recommended from Western Homeopaths, having been used in several Chicago hospitals with marked success in

typhoid fever as well as in appendicitis. It seems to have a special curative action on ulcerative or septic mucous membranes and its indications, as gleaned from the recent provings of Dr. J. C. Fahnestock, are as follows:

General languor, aching and weakness, pallid countenance, with dull headache, located mostly in the occiput and aggravated in the evening. Like *Bryonia* and *Gelsemium* it is a "quiet" remedy; the patient is too weak or fears to move, although sleep is disturbed.

The alimentary tract is markedly affected; the tongue has a whitish coating, there is loss of appetite with much belching of tasteless gas and an accumulation of sticky, whitish mucus in the mouth and throat. The abdomen feels full, with much rumbling of wind, accompanied, at time with periodical sharp cutting pains, especially in the right hypochondriac region. There are also periodical sharp, shooting, shifting pains in the limbs. The urine is markedly increased in volume, usually pale in color, with frequent desire for micturition and the stool loose, yellowish and offensive, causing great exhaustion. The symptoms are worse after eating, and in the evening, also after any effort, physical or mental, ameliorated by rest.

Arsenicum, 2d and 3d Stages.—A very restless remedy, even more pronounced in this direction than *Rhus Tox.* is *Arsenicum*. This drug is often indicated, particularly in the end of the second or in the third stage.

Arsenicum, with many of the foregoing drugs, such as *Baptisia*, *Bryonia*, *Arnica*, *Rhus Tox.*, *Nitric Acid* and others, has in its pathogenesis the characteristic lesion of Enteric fever in the ulceration of Peyer's Patches and the other lymphoid tissues of the small intestines. Its value has been chiefly demonstrated when there is excessive prostration, combined with extreme restlessness with high temperature, weak pulse, dry mouth, dry, red "shiny" tongue, which trembles when protruded, intense thirst for small sips of water, dry, hot, pale and scaly skin, burning pains, offensive prostrating diarrhoea, small in amount but dark and acrid and often following the ingestion of food. The

restlessness of *Arsenicum* is of the anxious kind, with delirium at night, ringing in the ears, vertigo and trembling.

Arsenicum also has the enlarged and tender spleen and abdomen, and the urinary examination shows the presence of catarrhal or croupous nephritis.

This drug will be chosen particularly for its anxious restlessness, dry, hot, burning skin, insatiable thirst for small sips of water, the after midnight aggravation, amelioration from warmth, and the small, dark, burning stools, with the accompanying urinary indications and a general weak, cachectic, adynamic constitution.

Calc. Carb., 1st and 2d Stages.—*Calcarea Carbonica* may be found useful in the early stages of the disease when the person suffers from insomnia, sleep being disturbed by dreams which awaken him; he starts up full of fright, sees things in his sleep and has hallucinations. There is usually impaired nutrition, a cold head with pale, puffed face, cold sweat at the neck or forehead and chilliness, with aversion to open air. The digestive disturbances comprise a sour, bad taste in the mouth, bloated abdomen and whitish diarrhoea, or may be constipated. If this picture is fitted to the "fat, fair and flabby" characteristics, the selection of the drug seems justified.

Calc. Carb. is also indicated about the second week when the rash does not appear and the patient goes into a sort of stupor. Sleep is restless, anxious and distressed, although the patient may be unconscious. He cries out, has twitchings of the muscles, the body may be hot and the limbs cold and clammy, the abdomen bloated and meteoric.

Hyoscyamus, 1st, 2d and Advanced Stages.—*Hyoscyamus* is a remedy "par excellence" in the advanced stages of typhoid fever, although it may be indicated at any time during the first and second stages.

This drug should be called to mind when there is quiet, muttering delirium, lasciviousness, patient exposing his sexual organs, uses obscene terms, reaches for things, picks at the bedclothes and is suspicious of all his surroundings. Prostration is marked, breathing stertorous,

pulse weak, tongue dry, brown and cracked, offensive sordes on the teeth, dropping of the lower jaw, twitching and trembling of the muscles, meteorism and inflated abdomen and may have involuntary discharges. If this is accompanied by the dry irritant cough, hypostasis of the lungs, and especially the twitching of muscles, *Hyoscyamus* will be the proper remedy.

Apis Mell, 2d Stage.—In the second stage *Apis Mell* may be indicated by the following symptoms: There is great prostration, muttering delirium or may have coma and great muscular relaxation so that patient slides down the bed (*Mur. Acid*); the tongue is dry, red, cracked and blistered and protruded with difficulty, often catching on the teeth. Ascites and tympanites are noted, the abdomen being very sensitive to touch, there is sharp, stinging pain and fever, usually without thirst, aggravated from 4-6 p. m. The skin is waxy and dry, hot in some places, in others cool; there is involuntary stool, "wide-open anus," involuntary micturition, or the urine may be suppressed. *Apis* is particularly to be thought of when there is meningeal irritation or meningitis and a hydrocephalic condition, the patient utters a shrill cry and exhibits extreme restlessness and nervous irritability, also in oedematous conditions, as oedema glottidis, etc. Most of the symptoms are aggravated from warmth and show marked aggravation about 5 p. m.

Cocculus Ind., 2d Stage.—*Cocculus Indicus* will be found valuable where the nervous symptoms are prominent. Vertigo is pronounced, there is nausea and vomiting, often fainting, insomnia, difficulty in collecting ideas, business prattle, confusion of mind and heavy eyelids. The tongue is white or yellowish, with bitter taste in the mouth, aversion to or vomiting at sight or smell of food (*Colchicum*); desire for cold drinks, distended abdomen, which is tympanitic, due to retained flatus, there is oppression of the lungs, trembling, and as most symptoms are aggravated from motion, the patient lies quiet with no inclination to move. There may be constipation, with hard and difficult evacuation, or thin, whitish, yellow, frequent diarrhoea.

Colchicum, 2d Stage.—Colchicum is also a quiet remedy and also has the disgust for, and nausea at, smell of food, even more pronounced than *Cocculus*. Its symptoms are referable principally to the abdomen. The body is hot and extremities cold, there is marked tympanitis with coldness, nausea and vomiting when sitting up in bed (*Bry.*), with watery, yellowish, membranous or bloody stool, which may look like washings of meat (*Rhus Tox.*). Tenesmus is frequently present with spasms of the sphincter ani or involuntary discharges.

Mentally we find the brain slightly toxæmic, but when spoken to the patient answers correctly (*Phos. Ac.*); there is no mental restlessness or worry regarding his condition, but much prostration, and cold sweat on forehead (*Veratrum alb.*). The skin is pale and cold, especially the extremities to the knees, the breath cold, the tongue stiff, heavy, coated white, with salivation, and frequently there is oppression of the chest with respiratory complications, also stiffness of the joints. This remedy will chiefly be called for in the second stage, or in mild cases during the third stage and especially in gouty or rheumatic subjects.

Sulfur, 2d Stage.—Sulfur may be found applicable at any time, but more especially in the second stage of the disease.

The fever is continuous with sometimes a slight morning fall with internal heat and drowsiness and may have chills. The sensorium is dulled, the patient answers questions slowly and presents a hot skin, covered with itching eruptions with no sweat and no re-active power. The tongue is dry, red at the edges and tip, the abdomen tender and meteoric with offensive flatulence, changing stools or diarrhoea with exhaustion, worse at 5 a. m.; scanty, offensive and dark colored urine and hot soles of the feet so that the latter are often protruded from the bedclothes, complete the picture. If this condition is complicated with pneumonitis its use has been followed with gratifying results. As an intercurrent when no other special remedy seems indicated it has also been found useful to bring about re-action.

Other characteristic symptoms are the nocturnal aggravation (excepting diar-

rhoea), the aversion of the patient to being sponged or bathed and flushes of heat.

Lycopodium, end of 2d and beginning of 3d week.—The sphere of *Lycopodium* is especially at the end of the second week and the beginning of the third week, when the rash does not appear and the patient sinks into a state of unconsciousness with muttering delirium, staring, fishy eyes, rattling breathing, the throat being full of phlegm, dropping of the lower jaw, carphology, inflated abdomen, empty eructations, meteorism, constipation, sudden twitching of the limbs, involuntary urination or retention of urine, with frequently the characteristic uric acid diathesis. *Lycopodium* also has coldness in various parts of the body and a peculiar symptom is: "coldness of one foot while the other is hot." The pulse is intermittent and rapid, tongue coated whitish and swollen and when protruded rolls to one side. If pneumonitis is present, the characteristic fan-like motion of *alae nasi* will be especially observed and the *Lycopodium* aggravation of all symptoms from 4-8 p. m. will also assist in the choice of this remedy. The presence of constipation is by several observers claimed to be *sine qua non* to the careful selection of the drug.

Lachesis, 2d and 3d Stages.—Another remedy indicated in the second or third stage of Typhoid fever is *Lachesis*, more especially in the severe cases.

The prostration is profound, the pulse is weak, there is low delirium with a dark or purplish congestion of the face, the tongue is coated brown, trembles, may be blistered and bleeding and catches on the teeth when protruded. The discharges of *Lachesis* are exceedingly offensive, the stool often being mixed with dark, decomposed blood, hemorrhages of dark, disintegrated blood frequently occurring from different parts of the body. In addition, the great characteristics of *Lachesis*, intolerance of pressure, evinced in the throwing off of bed clothes, removal of the constrictions of clothing, especially around the neck, the peculiar loquaciousness and aggravation of all symptoms after sleep will suggest the use of this sovereign remedy.

Taraxacum, 2d Stage.—*Taraxacum*

may sometimes be indicated, its characteristic "mapped" tongue leading to the investigation of its merits. There is restlessness, with tearing pains in the limbs, intolerable while at rest; constant, muttering delirium, great chilliness after eating and drinking, meteorism, copious urine and constipation with difficult stool.

Agaricus, 2d or 3d Stage.—*Agaricus* is indicated in severe cases during the third or even the second week, with constant, violent, chattering delirium, dry, tremulous tongue, formication, tremor of all muscles and persistent rigidity of the arms. There may be cyanosis due to feeble cardiac action and consequent weak pulse.

Agaricine Ix is recommended where *Agaricus* fails to act.

Zincum, 3d Stage.—*Zincum Met.* suggests itself in comparison with *Agaricus*. It also has tremor and twitching of the muscles, especially of the feet, but particularly during sleep at night (*Agar.* when awake during the day). There is prostration, brain-fag, suppressed or belated eruption and aggravation at night and from the use of stimulants. These characteristics fitted to the other typhoid symptoms will justify its selection, especially if cerebral paralysis is threatened.

Muriatic Acid, 3d Stage.—A very frequently indicated and very valuable and efficacious remedy, especially during the third stage is *Muriatic Acid*.

Here the prostration and muscular degeneration is so great, that the patient slides down the bed, not having the strength to keep in position. A state of coma may supervene with staring eyes, pulse intermittent, tongue dry and sometimes paralyzed, so that it rattles in the mouth, the saliva running from the mouth down to the chest, with dropping of the lower jaw, sordes of the teeth, coldness of the extremities, distended abdomen and involuntary discharges, the stool being frequent, scanty and putrid.

Dr. St. Clair Smith recommends giving 10-15 drops of this remedy *Ix* in a glass of water, 1 teaspoonful every 2-3 hours, during the whole course of this disease as a tonic and an aid to gastric digestion. The acidulated water is grateful to the patient and its administration often aborts

the severe symptoms of the later stages of the disease.

Phosphoric Acid, early stages and 3d stage.—*Phosphoric Acid* resembles *Muriatic acid* in some respects, but the degree of extreme prostration of the latter is lacking, and mentally the picture also varies. *Phosphoric acid* has indifference and apathy (*Muriatic acid* taciturnity), the patient is, however, readily aroused, will answer questions intelligently and drop off to sleep again.

Epistaxis with no sense of relief (reverse of *Rhus Tox*) at the beginning of an attack of Typhoid suggests the selection of this drug with its other characteristic symptoms.

There are blue rings around the eyes, pointed nose, dry tongue, which may be pale and covered with mucus, and weak pulse. The abdomen is tympanitic, the urine very profuse, involuntary and albuminous, with excess of triple phosphates. Diarrhoea of watery or bloody involuntary stools containing undigested food, cold extremities, copious sweats and generally slow reaction point to the choice of this remedy. It may be indicated in the early stages, but it is principally in the third stage that it has been found very efficient.

Phosphorus, 2d and 3d Stage.—*Phosphorus* must be thought of in connection with its acid and is particularly indicated when pneumonic conditions prevail. There is a hot head, chest and abdomen, and cold extremities, the face being ashy, the tongue covered with viscid slimy mucus which is expectorated with difficulty, or the tongue may be dry and brown or whitish, the teeth being covered with tenacious sordes. There is burning thirst, better by cold drinks, which, when they get warmed in the stomach are promptly vomited. There is a feeling of heaviness on the chest, and profuse sweat without relief (like *Merc.*). The liver and spleen are enlarged, and there is a yellowish diarrhoea streaked with blood aggravated after eating, and causing increased prostration (*Phos. Acid*, does not prostrate). In late stages when paralysis of the lungs threatens with much rattling of mucus (*Ant. Tart.*) and there is hot breath, and cold, clammy extremities, its value has often been demonstrated.

SURGICAL ERA

CHAS. ADAMS, M. D., EDITOR

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ORIGINAL ARTICLES

THE REPAIR OF THE VAGINAL OUTLET.*

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The subject I have selected for my paper to-night is not a new one and I have no anticipation of presenting any novel or startling theories as to the repair of the lacerated vaginal outlet, yet, when I consider the frequency with which the vaginal floor and the perineum are lacerated, the infrequency with which the repair is attempted, and the manifestly wrong ideas still held by many practitioners regarding the methods of repair, it may not be without profit to pause for a few minutes to consider the subject of the proper method in repair of the vaginal outlet.

In the first place, I desire to urge the importance of immediate repair of the laceration, whether of the perineum or any other portion of the floor. With our present aseptic methods the old fear of increasing the liability of infection by introducing sutures into a part bathed by vaginal or uterine secretions may be laid aside. Indeed, the bringing together of all raw surfaces is the first step in the prevention of septic poisoning. And when we call to mind the large number of women who have suffered for years with rectocele, prolapsus uteri, and the well-known train of sequences, the failure to treat this condition at its most favorable time should subject the obstetrician to almost the same charges of criminal neglect as is the fate of the surgeon who fails to recognize a fracture, or properly reduce it.

Some of the difficulties in the way of a satisfactory repair of the vaginal outlet

lie in a false idea regarding the importance of the different structures entering into its formation. The old idea that the perineal body was the most important factor in maintaining the organs in their proper position is fallacious, and all operations which contemplate the simple bringing together of the lacerated perineal tissues fail to meet all the requirements of perfect repair. The main support of the pelvic viscera is not the perineal body, but the levator ani muscle and the pelvic fascia, and when they are lacerated or become atrophied, displacement of the pelvic viscera follows. These muscles arise on either side of the symphysis pubis and pass back around the lateral vaginal walls and rectum, and are inserted by interlacing fibers into the coccyx and sacrum. The vaginal outlet is compressed on both sides by these muscles, and whatever sphincteric power it possesses is due to them. Any operation which fails to recognize this will fail to restore the vaginal outlet to its normal position.

Another point to be remembered is that these muscles may be severely lacerated without a corresponding laceration of the perineal skin. Indeed, this may remain intact. I am much inclined to believe that the old-fashioned support of the perineum favored this lateral and serious injury by its clumsy attempt to save the perineal skin, and I am convinced from the many cases of relaxed vaginal outlets that come under the surgeon's care that the old fellows who practiced obstetrics and never had a lacerated perineum may have achieved this result by producing a more undesirable laceration of the levator ani, while saving the integument and maintaining appearances. Proper treatment can only be instituted after an accurate diagnosis. No casual external examination should suffice. The obstetrician should make a careful visual inspection of the vulva and interior of the vagina under a good light, and if lacera-

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tions are present, should immediately repair them, or call in a surgeon who will attend to it.

The simplest direction is to unite any divided structures, thus placing the parts in the position usually occupied by them. The carrying out of these directions may not be so difficult if attempted immediately after the injury, and if careful visual examination be made, but in old cases, in which atrophic changes have taken place, the operation may require much mechanical skill and a thorough knowledge of pelvic anatomy.

Recent Injuries. — Recent injuries may be classed under four heads: — (1) Tears through the perineum extending up as far as the posterior column; (2) tears of the vaginal wall extending from the fourchette up into one or both vaginal sulci, and separating the levator and their rectal attachments on one or both sides.

These lacerations are entirely within the vagina, and while of the most severe kind so far as subsequent good results are concerned, are the ones most frequently overlooked. They of all others are the cause of the condition known as relaxed outlet; a condition which has in its train vesical prolapse, uterine prolapse, rectal prolapse, and their accompanying ills. Many an honest doctor has declared that his patient had no laceration and the nurse has confirmed his statements, but his patient's unfortunate subsequent history has belied this. Occasionally the laceration of the levator ani muscle may be quite submucous, exactly as a tendon may be ruptured or a muscle torn from its attachment in some external part and no laceration of the overlying structures result. In such cases the obstetrician may be excusable if he does not detect the injury, but he should not be, so long as the wound is compound, — namely, involves both mucous membrane and muscle.

(3) Combination of the first and second varieties, in which there is laceration of the skin in the median line extending up through the so-called perineal body to the posterior column of the vagina, and then extending up one or usually both

vaginal sulci lacerating the levator ani and forming a Y-shaped tear.

(4) The laceration in which the first or third of the conditions is complicated by the extension of the tear backward through the perineum so that it includes the sphincter ani and more or less of the recto-vaginal space, thus causing incontinence of faeces and flatulence and entailing on the patient one of the most disagreeable conditions. I have been thus explicit in the mentioning of these conditions because, while the first and fourth of these accidents are usually recognized, the second and third are not, and, as I said before, are the most prolific cause of the pelvic plastic operations.

Treatment of Recent Lacerations. — That lacerations should be repaired is now generally recognized, but for many reasons the work is very improperly done, — the obstetrician, as suggested in this paper, may not have recognized certain forms; if he does, he hesitates to admit the injury through fear that the patient may think he is unskillful, or if he does attempt repair, he either does it hurriedly because he fears his patient's strength, or does not make all the necessary preparation because he fears to magnify the importance of the operation, and to ask for necessary assistance.

Except in the first form mentioned, the patient should be given an anesthetic. In all forms, the patient should be placed in the lithotomy position, brought to the edge of the bed, the parts widely and thoroughly exposed, the vagina packed above the tear and the usual aseptic methods employed. A vaginal retractor to lift the anterior vaginal wall is a necessity. Tears through the mucous membrane alone are best united by strong catgut, and many operators use catgut for all sutures inside the vagina, but if accompanying these there are tears of the deeper structures I believe in the use of silkworm gut, at least at the point of rupture of the levator ani muscle, which usually occurs at about the posterior column of the vagina. My own procedure, therefore, is to commence at the upper angle of the wound and unite the mucous membrane by catgut stitches, at the point indicated to insert on one or both sides, according-

ly as the laceration is uni- or bi-lateral, a silkworm gut stitch, and then to close the remaining lacerations in the vagina with catgut and externally with silkworm gut. If the perineal body is difficult to bring together and I fear pocketing, I employ a silkworm gut making a wide curve beneath the lacerated structures exactly as I do in attempting the immediate closure of a fistulous tract. This latter stitch is condemned by Howard Kelly in his recent work, and if it were the only one employed, as was the custom several years ago, I should concur with him, but, if associated with the vaginal stitches, it adds strength and stability and forms another obstacle to the collection of secretions. Having removed the pack, dried the parts, and dusted them with boracic powder, a simple pad is applied. Formerly I advised tying the knees together, the use of the catheter for the first week, and kept the bowels closed; now I do not tie the knees together, do not advise the use of the catheter, and open the bowels on the second day, and remove the stitches on the eighth day.

If the laceration is of the fourth variety, the laceration extending through into the rectum, the necessity for immediate operation is all the more imperative. The first step is the closure of the rectal mucous membrane by interrupted catgut stitches. One or two silkworm gut stitches are now inserted, entering on the skin surface, engaging the ruptured sphincter muscle, passing through the recto-vaginal septum, engaging the ruptured muscle on the other side, and coming out on the skin surface. These stitches may be left untied until the vaginal tear has been treated as described in the more simple form of laceration. Additional stitches are added until proper approximation results.

In the after-treatment the maintenance of the bowels in a soft condition is the most important feature of the treatment.

If, from the exhausted condition of the patient, or the lack of skilled assistants, the operation can not be made immediately upon the completion of labor, it may be postponed twelve or even twenty-four hours and good results be obtained, but

the swelling which usually takes place at this later date often makes the operation not only more painful but more difficult of execution. Even if the operation has been delayed for a week or more it may still be made successfully, as I have frequently demonstrated, and notwithstanding the common idea that the danger of infection from the lochia is very great at this period, I have met with no unfortunate results. The manner of operation does not differ essentially from that made during the primary period except in the preliminary step. The wound has already commenced to granulate and its edges must be made fresh. In the majority of instances this may be accomplished by a thorough curetting of the granulated surfaces with a sharp curette aided if necessary by trimming off doubtful edges with the scissors. When a sound, fresh, raw surface has been obtained, the wound may be sutured in the usual way.

It may not be considered necessary in this society to add that a thorough evacuation of the intestinal tract is one of the necessary elements in the preparation of the patient for operation. It is not sufficient that the patient has had a daily evacuation of the bowel or a daily enema. She should have the intestinal tract cleaned by thorough catharsis and the colon cleaned by flushing. In one case at least, I attribute a bad result to the failure of the attending physician to properly prepare the patient in this regard.

Old Lacerations. — Old lacerations are more difficult of treatment than recent ones, owing, first, to the presence of cicatricial tissue that must be removed in order to make a fresh surface; second, to the atrophic changes that may have taken place in the severed muscles; third, to the malposition of organs from lack of proper support; and fourth, to the unnatural stretching of the vaginal walls from the pressure of misplaced organs. Many operations have been advocated for the restoration of these parts, and the circumstances of each case should receive careful investigation before a method is selected, but in general I believe it may be said that the rule suggested in the treatment of recent injuries, namely, that the parts should be

brought together so that denuded structures should be reunited is as applicable in old cases as in recent ones. All operations that fail to do this should be avoided. The first step, then, is a careful examination of the parts to determine the direction of the rupture; the next, the removal of the cicatricial tissue in the line of the rupture; the location of the divided or stretched muscles and the restoring of all structures to their normal relations. It must be admitted that malposition of organs, — the descent of the uterus, the prolapse of the bladder, or the ballooning of the rectum, may necessitate the formation of some artificial bulwark, but in general the rule holds good and should be a guide in the character of the plastic operation made.

For practical purposes old lacerations may be divided into two groups, — (1) Those in which there is a complete tear in the recto-vaginal septum; and, (2) Those in which there is not. I will consider the latter class first. It includes the first three groups referred to in treating recent tears. Examination may show the skin torn back as far as the sphincter ani with thin cicatricial tissue at the bottom of the wound. First group; the skin torn and scars extending up each sulcus, with prolapsed rectal wall; second group; or a deep skin perineum with a dilated vagina and scars extending up each sulcus; third group; in every case the outlet is large and the vaginal canal dilated and relaxed. The most important point to note is that the posterior column of the vagina is usually intact and the tissue thick and strong. Most of the flap-splitting operations and such operations as contemplate the removal of tissue at the posterior vaginal wall are wrong in principle, inasmuch as they remove uninjured sound tissue, allowing thin stretched cicatricial tissue to remain, and they fail to bring together the divided muscles or the lateral walls of the vagina.

In the operation, then, after all the usual preparations have been made, and the patient is in the dorsal position, fix the normal posterior of the hymenal ring by a forcep or hook on either side where the retracted ends are situated — fix the lower edge of the posterior column of the

vagina — fix the end of the perineal tear and the upper end of the tear in either or both sulci as the case may be, and outline this space by cutting through the mucous membrane with your knife, letting your guide as to the amount of tissue to be removed, so far as the lateral walls of the vagina are considered, be the amount of cicatricial tissue and the amount of relaxation of the vaginal wall. The aim should be the restoration of the canal to its normal size. The removal of the cicatricial tissues lays bare the divided levator ani fibres, and the bringing together of the deep surfaces of the wound restores the function of the muscles divided and gives a support that nothing else can give. The mucous membrane of the tissues thus outlined is removed by the knife or scissors, and the divided ends of the muscles in the lateral walls of the vagina brought together by catgut buried sutures. These may be reinforced in each sulcus by one silkworm gut suture which passes through all structures except the rectal and is tied on the mucous surface of the vagina. This prevents retraction of the muscles if the catgut is absorbed too promptly, and by bringing together all the structures prevents any dead spaces. Its point of entrance is about the middle of the sulcus line (antero-posteriorly) on the lateral surface of the vaginal wall, and its exit after passing under the floor of the sulcus, at an opposite point on the posterior vaginal column. A similar silkworm stitch is used to bring together the deeper structures of the perineum in case of tear of that part, as described in recent tears. The remainder of the wound edges are united by catgut. The effect is not only to make smaller the vaginal opening but to advance the posterior vaginal wall and lessen the calibre of the vaginal canal.

Complete Lacerations. — In complete lacerations the sphincter ani is severed, the circle is broken and the ends of the muscle retract. Fortunately, the tear rarely extends up each sulcus, and the lower fibres of the levator ani are uninjured. The very giving away of the sphincter relieves the levator ani muscles and takes off the strain from them, just as fracture of a

bone often prevents dislocation at a neighboring joint. Because of the lack of injury to the levator ani muscles, prolapse and relaxed vagina are less common in complete tears than in incomplete ruptures. Examination of this tear will usually show on each side a puckering or pitting at the lower angle of the perineal scar which indicates the site of the ends of the sphincter muscle; the distance between these divided ends represents the length of the tear in the recto-vaginal septum. It is well to remember this as the straightening out of the sphincter muscle pulls down the angles of the tear so that the tear forms the upper border of the anus and gives the appearance of a superficial wound. The bringing together of the divided muscle ends shows a different condition of affairs. The same rules as given in the preceding conditions are applicable here. Reproduce as nearly as possible the conditions present immediately after injury. This means the removal of all scar tissue, with some excess to allow for relaxed tissue, and the uncovering of the ends of the divided muscles. Fix, then, the ends of the divided muscles, the lower border of the hymen on each side, the end of the posterior column of the vagina, and the upper limit of tear in the vaginal sulci if these have been lacerated. The first incision extends from one muscle end to the other and splits the vaginal septum; it is then extended up to the lower border of the hymen, then up the lateral wall along the vaginal sulcus to its extremity, then back to the end of the posterior column of the vagina, the same line is made on the opposite side, and the mucous membrane of the included area is removed.

The rectal mucous membrane from the upper angle to the sphincter is now approximated with catgut sutures, entering and emerging on the rectal side. A silk-worm gut suture is then introduced through the skin, catching up the divided end of the sphincter muscle, passing through the rectal septum, catching up the end of the sphincter muscle on the opposite side, and emerging through the skin. This is the most important suture,

and when tied brings together the sphincter ani muscles, and if proper union occurs, restores control of the bowel. With the tying of this suture and the application of a few more catgut rectal sutures, the wound becomes an incomplete tear, and the operation is finished as described under that head.

I have not expected in this brief paper to give much of the technique of the operation methods. Even with charts the different planes are difficult to represent, and without them, all descriptions are absolutely inadequate. I have hoped to emphasize, first, the importance of immediate repair; and, second, that all denudations should aim to reproduce as far as possible the original tears; and, third, that all operation measures should aim to bring together divided muscles and depend upon them for support and restoration of function.

3130 INDIANA AVENUE.

MEDULLARY NARCOSIS.

The Editor of The Medical Era:

Dear Doctor—As the profession generally is quite interested in the results of medullary narcosis (spinal cocaineization) I take the liberty of sending you a report of my first case (the first I understand to be reported from Buffalo). Mr. Curtiss, a patient of Dr. Chadwick's, sixty years, entered the Homeopathic Hospital November 9th for the removal of a tumor of the thigh. Being the attending surgeon he came under my care. He had suffered a slight apoplectic stroke one year ago, leaving his speech affected slightly but not impairing in any way his tactile sense. Height, five feet eight inches; weight, one hundred pounds; general condition, good; previous narcosis, none; respiratory and circulatory system, normal; temperature on morning of operation, 99.2; pulse, 100; urine, slight trace of albumen; knee jerk exaggerated; pupillary reaction, normal.

The method of injecting the cocaine into the sub-dural space was practically the same as that recommended by Tuffier. Patient sat on the edge of the operating table, back to the light. The articulation of the fourth and fifth verte-

brae was located by drawing a line from one iliac crest to the other; such line crossing slightly above the articulation. The needle used was such as belongs to the ordinary aspirating syringe, about two and one-half inches long and of a calibre three times that of an ordinary hypodermic needle. The long bevel had been filed down, reducing the bevel length one-half. Dr. Critchlow, pathologist to the hospital, had in charge the preparation of the cocaine solution. It was intended to have used a freshly prepared solution, made by first boiling the water in a test tube, then adding three-tenths of a grain of the cocaine crystals to fifteen minims of this sterile water, but owing to the absence of the crystals a 2 per cent drug store preparation of indefinite age was rendered sterile and fifteen minims of this was drawn into a sterile syringe. The point selected for the insertion of the needle was three-eighths of an inch to the right of the median line and midway in the interspace, caused by the fourth and fifth vertebrae being pulled apart when the patient bent forward. The needle having been rendered thoroughly sterile and the back of the patient being well scrubbed, he was directed to bend forward in the "scorcher's position." The needle detached from the syringe was inserted at the point mentioned, being directly upward and inward, passing slowly through the structures. It passed two and one-half inches without the escape of the spinal fluid. The patient being thin I felt confident a needle of that length was sufficiently long. No fluid appearing, the needle was withdrawn and inserted on the left side at a corresponding distance and angle; no fluid escaped. The space between the fifth vertebrae and sacrum was then selected, but the needle could not be inserted more than one and one-half inches. Selecting a point not more than one-fourth inch from the median line and between the fourth and fifth vertebrae, the needle was inserted at a very slight angle to the spine, in fact, were the patient sitting straight upright, the needle would be at a right angle with the spine and but slightly directed from without inward. Again it was pushed in slowly and at a depth of two and one-fourth

inches the spinal fluid escaped. Two drops of clear fluid, showing unquestionably that the sub-dural space was reached. The syringe was then attached (all instruments having been rendered sterile), and fifteen minims of a 2 per cent solution was slowly injected, allowing forty seconds for this procedure; the needle was then withdrawn and puncture sealed with collodion.

Patient was placed on his back on the operating table and close observations were taken by Drs. Groesbeck and Critchlow every few minutes. The following is their report:

Administration of cocaine 12 o'clock; 32 minutes, 30 seconds.

12:30 p. m. (before injection), pulse 116, temperature 99 2-5.

12:36 p. m., pulse 126.

12:43 p. m., pulse 134.

12:48 p. m., pulse 78.

12:51 p. m., pulse 68.

12:55 p. m., pulse 86.

1 p. m., pulse 90.

1:05 p. m., pulse 97.

1:07 p. m., operation completed.

Partial anesthesia first appeared in thigh 12:36, six minutes after the injection; sensation still present in the feet; slight tremors through the legs; 12:43, anesthesia complete below the lumbar puncture. Operation begun.

12:46, when asked if felt pain, said, felt some pulling at seat of operation. 12:50, anterior crural nerve exposed and when pinched or pricked with knife, patient complained of sharp pain; otherwise he complained of no sensation whatsoever during the entire operation.

The operation consumed thirty-two minutes from the first incision until the complete closure of the wound. The anesthesia lasted from 12:38, when dullness to pin prick was first noticed in the thigh, until 1:15, when it had almost entirely passed away. A total of thirty-seven minutes. The operation consisted in making an incision down the thigh from the ramus of the pubes for a distance of five inches. The tumor was encapsulated and embedded beneath the rectus and adductor longus muscles and attached to the pubes. Branches of the anterior crural nerve

were cut as well as a number of small blood vessels.

During the operation the patient talked freely and said he felt very comfortable, not complaining of nausea once, although he looked pale throughout the operation. He had regained complete sensation in his feet within two hours after the operation. He passed a comfortable night and felt the next morning like getting up, no nausea or vomiting following. He has continued to do well (now the fourth day) since the operation.

Some points to be gained from even this one case are, first, that although the patient was susceptible to cocainization, yet he took it well and rallied quickly from its effects, unusually so in fact, as the majority of cases reported where they have been influenced at all by fifteen minims of 2 per cent solution have remained under its effects from forty to seventy minutes. Second, the difficulty of reaching the canal by following the carefully worded instructions of Tuffier; I was unable to reach the medullary space by three repeated punctures, but when I started the needle nearer the spinal process and directed it more nearly at a right angle with the length of the spine and but slightly from without inward, I secured the fluid at once. Third, that had the operation required an hour or more, I should, in his case, been obliged to repeat the cocaine injection or resort to chloroform because the effects lasted less than forty minutes.

Just what this method is going to do for us both in surgery and obstetrics remains to be seen, but it promises sufficient to induce us to make the most practical investigation concerning its employment.

DeWitt G. Wilcox.

Dr. W. A. Dewey, of Ann Arbor, Mich., has bought the Medical Century, and hereafter will be its editor and publisher. The Medical Era extends to Dr. Dewey fraternal greeting and a cordial welcome to the field of journalism.

Subscribers

Who have received bills for the Era for 1900 will kindly remit on receipt of this issue. Those more than two years in arrears will receive drafts.

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The New Hospital at Ann Arbor.

The Homeopathic Medical College of the University of Michigan celebrated the opening of its new hospital Dec. 6th, 1900. The exercises were held in the Gymnasium Hall. Addresses were delivered by Prof. Chas. E. Walton, M. D., of Cincinnati; Ch. Gatchell, M. D., of Chicago; R. C. Olin, M. D., of Detroit, and Prof. R. S. Copeland, M. D., President of the Michigan State Homeopathic Medical Society.

There is no finer hospital building anywhere than this one at Ann Arbor. It has a most picturesque location. Its appointments and equipment are the best afforded by modern methods of hospital construction. It is, altogether, a model institution. It has a capacity of 140 beds. That it will be well conducted by its able staff goes without the saying. Its establishment is a high compliment to the members of the faculty of the Ann Arbor School, who are receiving congratulations from all parts of the country.

Dr. Clarence Bartlett succeeds Dr. Wm. W. Van Baun as editor of the Hahnemannian Monthly. While much regretting Dr. Van Baun's retirement, we welcome Dr. Bartlett back into the ranks of the editorial fraternity.



That the best guesser is the best prophet.

That if your secret is revealed it is your own fault.

That the chief end of man is the one with the head on it.

That you should always earn money before you spend it.

That a wasp is a small animal, but when it says drop it, everybody lets go.

That there are as many ways to propose to a girl as there are to use up bread-crusts.

That you should never go back on a friend so long as you can use him to advantage.

That actions speak louder than words, and so they invented the deaf and dumb alphabet.

That an optimist is a wise man whom everybody thinks is a fool, and a pessimist is a fool whom everybody thinks is a wise man.

That the cow never blows its own horn.

That a great boaster is only one remove from a liar.

That if you mind your own business you will never be out of a job.

That love is blind, consequently it is not necessary to turn up the gas.

That you should not despise the lowly, for the underjaw does all the work.

That a little nonsense now and then is relished if it has a good deal of sense in it.

That in order to know the sweet solace of forgiveness for sin, one first must sin.

That a friend in need is a friend indeed, but too many needy friends will break you.

That the police force of Chicago is not to be vaccinated; they never catch anything.

That the only time we don't want people to agree with us is when we admit that we have made fools of ourselves.

MEDICAL ERA

CH. GATCHELL, M. D., EDITOR

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NO. 2

THE HABITAT AND THE MODE OF CONVEYANCE OF THE MALARIAL PARASITE.

To-day the field of medicine which is being most assiduously cultivated is that of etiology and prophylaxis. Curative medicine lags. Preventive medicine offers the greatest field for effort.

In the case of malarial fever a new chapter in etiology has been written. Twenty years ago Laveran made himself immortal in medicine by his discovery of the parasite to which his name is attached. From that time, as a result of Laveran's discovery, the causative agent in the disease under consideration has been known.

But, heretofore, this knowledge has contributed nothing to our powers of prevention. Recently, however, a new and important discovery has been made. From the observations of the past few years it would seem that the intermediate host of the malarial parasite had been discovered, and that the mode of conveyance of the organism from the affected to the unaffected had been determined.

As the hog is the intermediate host which conveys into man's system the ova of the trichina spiralis, so the mosquito has been found to play a similar part in the conveyance of the plasmodium malariae.

The nature of the malarial fevers — the familiar quotidian, tertian and quartan intermittents, and the estivoautumnal type — is as well understood as is that of any disease in the entire catalogue, and far better than many.

Into the blood of the victim are intro-

duced the specific sporules. The sporules enter the red blood corpuscles. In a few days the young parasites develop. At first they are small protoplasmic masses having amebic movements. At the expense of their hosts the organisms increase in size and develop a peculiar pigment. At the end of a cycle of about forty-eight hours segmentation and sporulation take place. This process is attended by destruction of the inhabited red blood cells, and the discharge into the blood-current of sporules and organic toxins. The toxins thus liberated in the blood excite the febrile paroxysm — chill, fever and sweat.

The recently freed spores adhere to and enter other red blood corpuscles, which go through a new cycle, and in another forty-eight hours the paroxysm is repeated.

In order for a person previously unaffected to become the subject of malarial fever it is necessary for the malarial parasite to be introduced into the system and find its way to the blood. According to the recent investigations and experiments of Koch made in Italy, Java and New Guinea, the permanent home of the malarial parasite is in the human body itself. Hence, the conveyance of the organism must be from the blood of one human being to the blood of another, and the agent in the transfer is the mosquito.

Since Ross first demonstrated this fact much additional evidence has been brought out in its support, and it may now be accepted as established.

It has been found that all mosquitos — of which there are many species — are not capable of acting as carriers of the malarial parasite. Mosquitos of the genus culex have not the power. Those of the genus anopheles are the active agents.

The anopheles is essentially a country mosquito. It is not commonly found in cities. In the spring the fecundated females come out from their state of hybernation and deposit their eggs on the surface of the pools of stagnant water. The eggs pass through their larval and pupal stages in from twenty-five to thirty days, and in the course of the summer they breed from three to five generations.

In order to convey malarial infection the anopheles must feed upon the blood of a person already affected with the disease. In so doing the insect, with the ingested blood which it withdraws, also takes in a number of sexually mature malarial parasites. In the middle intestine of the mosquito the parasites undergo the usual development. Pigmentation, segmentation and sporulation take place, and the sporules lodge and accumulate in the insect's salivary gland. When in this state the mosquito is in a condition to infect the human subject. When it "stings," it injects beneath the victim's skin the sporule-laden salivary secretion. The sporules are absorbed into the blood, there they undergo development, and there is a new case of "malarial fever."

This is the mode of infection of malaria. The parasite which is the specific cause of the disease is not taken into the system in food, nor in drinking-water, nor from the respired air, but the new victim is always inoculated by the infected mosquito, which has, in turn, drawn its supply of parasites from the blood of a human subject already suffering from the disease.

That there are those who are still skeptical regarding the verity of these recent discoveries in medical science is not remarkable. It would be remarkable if this were not so. But to those who have most closely investigated the subject the evidence in its support is conclusive.

The following facts have been established:

(a) Every phase of the development of the malarial parasite has been demonstrated to take place in the body of the mosquito.

(b) Mosquitos known to be free from the malarial organism have been made to

take blood from patients suffering from malaria, and, after the lapse of the proper time for the completion of the cycle of changes in the anopheles, healthy subjects stung by the infected insect have developed malaria of the same type as that from which the blood was originally drawn.

(c) Persons from a distance known to be free from malarial infection have, experimentally, taken up their residence in one of the most active malarial regions of the Roman compagna, and, while so residing, by means of screens and bars, have protected themselves absolutely from the bites of mosquitos. Although eating the same food, drinking the same water and breathing the same air as others, they have remained free from malarial infection, while the inhabitants about them suffered almost universally.

(d) Mosquitos have been sent from a malarial district to localities a thousand miles distant, where a case of malaria was never known. Healthy persons in the new locality developed malaria on being stung by the imported insects.

These demonstrations, all guarded by careful control experiments, would seem to be sufficient to establish as a fact the claim that the mosquito is the intermediate host of the malarial parasite, and is the active agent—and probably the sole agent—in conveying the infection from the sick to the well. As the rat is the intermediate host of bubonic fever, so is the mosquito—genus anopheles—of malarial fever.

This discovery opens a great, though difficult, field of prophylaxis. It means the destruction of the anopheles wherever human beings dwell. While this could be accomplished to a considerable extent in some parts of the globe, yet it would be a mighty task which communities are not prone to undertake. The probability is that its accomplishment must await the drainage of all paludal land as the earth becomes thickly populated. Then the pernicious insect will perish for want of breeding-place.

In the course of centuries this will be accomplished. Already, in various localities of the earth's surface, it has been done.

ORIGINAL ARTICLES

STRUMA.*

BY CHARLES E. KAHLKE, M. D.

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SENIOR PROFESSOR OF ANATOMY IN THE CHICAGO
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PITAL.

The object of this paper is to bring about a discussion of the treatment of goitre. Which cases can be cured medically, and which cases are surgical from the start? I know it is quite a general custom to persist in the medical treatment of all cases, regardless of the kind of struma we have to deal with. I make no claims to originality, the authorities quoted being Koenig, Senn and Warren.

Without mentioning the normal anatomy and relation of the thyroid gland I would like to remind you that accessory glands may be found anywhere in the triangular area, having as its base the line of the lower jaw, its apex the arch of the aorta and its sides the great vessels. The presence of these glands explains the occurrence of many epithelial tumors, mucous cysts, etc., in this region. Then, too, the thyro-lingual duct terminating at one end in the foramen cecum at the base of the tongue and at the other in the middle lobe of the thyroid, may explain the occurrence of cylindrical or elongated cysts. Thyroid tissue may be found about the aorta and as supra-pericardial bodies behind the sternum, or even in the base of the tongue. Lateral goitres may be found in the retro-pharyngeal region, developing apparently in the neighborhood of the epiglottis and passing around in the sinus pyriformis, or they may be found in the larynx and trachea. Where thyroid tissue is found there struma or goitre may be found.

Through experimentation with animals and operations on man we have learned something of the physiology of the gland. We know, for instance, that the thyroid has something to do with metabolism, for complete extirpation of this organ is followed by tetany or chronic cachexia strumipriva. These results can be avoided by transplantation of the thyroid gland into the abdominal

walls between the fascia and the peritoneum, or by subcutaneous injections of the thyroid extract. In animals after the removal of the gland there was noticed stunted growth, delayed ossification, sparse hair, stunted horns, often edema and evidences of idiocy. Partial removal resulted in compensatory hypertrophy of the part left, but with no development of the above-mentioned conditions. The function of the gland seems to be to destroy certain toxic substances circulating in the blood. The active principle of the theoretical gland juice seems to be some iodine derivative—an iodothyryn, as some call it.

In man, already stated, after the removal of the thyroid we sometimes have tetany or cachexia strumipriva. In goitrous regions the cachexia is noticed more, while in non-goitrous regions the tetany is noticed oftenest.

Von Eiselsberg has tabulated the following results following the absence of the thyroid:

1st. Fetal myxedema (intra-uterine), i. e., fetal rachitis or congenital cretinism.

2d. Infantile myxedema, i. e., typical cretinism; epidemic in Alpine regions.

3d. Spontaneous myxedema of adults, i. e., sporadic cretinism or cachexie pachydermique.

4th. Operative myxedema, i. e., (a) chronic cachexia strumipriva; (b) acute tetany after extirpation.

Now, when it comes to the kind of treatment we should employ we must first make a clinical differentiation between the benign and malignant forms. Of the benign forms we have, first, the gelatinous or the interacinous adenoma, the most usual form of goitre in the adult. It develops rapidly at pregnancy or change of life. In connection with this variety we find the cystic, fibrous and calcareous goitre. Second, hypertrophy of the thyroid, occurring at all ages as a general uniform enlargement of a colloid, adenomatous or vascular nature. Third, the fetal adenoma—occurring in very young individuals—forms nodular goitre. It develops in both sexes at puberty. Fourth, the vascular goitre, often occurring epidemically.

In practice it is necessary to differen-

*Hom. Med. Society of Chicago.

tiate between the diffuse and nodular goitres. The vascular and hypertrophic belong to the diffuse variety. The gelatinous goitre is usually classed with the nodular because from it we have the cysts and cystic adenomata. The fetal adenoma always forms nodules.

The diagnosis of the different forms just cited can be made in most cases with reasonable certainty. The hyperemic swelling of the gland found occasionally during menstruation and pregnancy manifests itself not as a nodular or diffuse swelling, but merely as a rounded full appearance of the neck. The gland feels a little enlarged, but its shape is not changed and its consistency is soft. If a genuine goitre does not develop the swelling soon disappears.

The struma follicularis hypertrophica differs from the former through its greater resistance and sharper borders. Oftener we find only isolated portions of the gland involved. Fetal adenoma—here we have one or more distinctly outlined soft nodules of rounded form, which are seldom larger than a hen's egg—sometimes connected together by little processes.

The struma vasculosa and aneurysmatica are uniform diffuse enlargements; they disappear more or less on pressure and reappear in pulsations. The aneurysmatica not only pulsates but has a bruit or blowing sound on auscultation. When the colloid is diffuse we have a uniform swelling. The lobes, which may be as large as the fist, are flat, doughy and quite soft. The fibroid goitre presents separate nodules which from the start are exquisitely hard, and which may develop in one lobe or the whole gland. The nodules vary in size from that of a pea to that of a hen's egg, seldom larger. They have a tendency to isolate themselves from the rest of the gland. They sometimes sink down behind the sternum or clavicle through their own weight. Larger fibrous growths present as hard, uneven uni- or bilateral tumors tending to gradual pedicle formation and to sinking onto the chest. The separate nodules have independent mobility. Sometimes we find goitres made up of a number of different tumors—parenchymatous, fibrous and cystic.

The majority of the older goitres show cystic changes arising from the gelatinous variety. The cysts may be small or large, developing gradually, or suddenly from hemorrhage into them; or several cysts may become confluent. The base remains broad. The cysts do not become pedunculated. The diagnosis is sometimes easy, but again may be difficult on account of the thickness of the cyst wall, or of the thickened contents.

We must not ascribe every case of disappearance of the goitre to the exhibition of this or that remedy, for some cases disappear spontaneously, especially in the light forms, when the patient goes from a region where goitre abounds to a non-goitrous region. Acute illnesses often cause the disappearance of the mild varieties.

Treatment.

Medical.—Iodine and its preparations and Carbolic acid are especially useful for the miasmatic forms. For the diffuse hypertrophic forms and for recently developed struma in youthful individuals Kali iodide is given internally and Iodine salve is applied externally.

Cardiac irritation with rapid emaciation means Iodine intoxication, and calls for a discontinuance of the same. Sometimes, during the administration of Potassium iodide, symptoms of cerebral congestion appear and occasionally the tumor becomes markedly worse during the first few days and signs of respiratory oppression appear. Now stop the Iodine and the tumor begins to disappear gradually.

For the symptoms ensuing from absence of the thyroid gland the thyroid extract internally or sub-cutaneously has been utilized with great success. With the improved condition in cases of cachexia stumipriva and myxedema the following symptoms may appear:—headache, palpitation, increased pulse rate, cardiac weakness, trembling, general weakness and even exhaustion. Then the extract has to be stopped.

In Basedow's disease, however, the results are not good. Here Natrum phos. acts better (Kocher.) The extract has been used to good advantage in cases of recent goitre in young individuals and in myxedema. The firm, colloid cysts and

fibroid goitres withstood the action. Of sixty cases Bruus cured 14, freed 20 of their annoying symptoms, and improved 9. The remaining 17 were not influenced. Recurrence seldom took place.

Medical treatment for many of these cases is of no avail. This is true especially in the case of true tumors (adenoma). It fails at times even for the simple hypertrophy, oftener for the vascular or colloid forms, entirely in the fibrous and calcareous varieties and in the case of cysts and nodular adenomatous tumors aids in nodular adenomatous tumors simply aids in causing the disappearance of some of the surrounding hypertrophied tissues. Here surgical measures are required.

How do we handle our parenchymatous varieties where medication fails? Ligation of the thyroid arteries in hard and nodular growths has questionable advantages, besides having a mortality of 4.7 per cent. Parenchymatous injections of Iodine are losing ground on account of unfortunate circumstances, such as death, severe asphyxia, etc. It seems to work best in cases of soft hypertrophied, and in the beginning of colloid, goitres which do not involve the whole lobe. In favorable cases it is followed by a rapid cicatricial contraction. At first 10 to 15 drops are used. The next dose depends upon the reaction to the first. Usually 2 to 20 injections are necessary. Of course a fine needle should be used, for this gives rise to no special difficulty in case a large vein is punctured. The tumor should be firmly fixed and the injection made into its substance.

Parenchymatous injections of 5-per-cent carbolic acid solution repeated once or twice a week are used with marked success by Senn, who says that it is perfectly safe, almost painless and appears to neutralize the primary microbic cause. The Iodine treatment internally is employed at the same time. The injections should be made into different parts of the tumor and should be repeated at least twice a week. If this fails electrolysis may be tried, but it is not known as yet how much to expect from this treatment. Warren says many cases of adenoma have been successfully treated by this means. This, rather than injection,

should be tried in the vascular varieties.

In general we say, the older the goitre the more uncertain the result and the more dangerous the procedure. Good results are claimed for the multiple injections of Iodoform emulsion (7 to 8 per cent).

In the case of cysts we find three different methods of treatment: first, incision; second, aspiration and injection of tincture of Iodine; third, the enucleation of the cyst. Of these methods the safest and most satisfactory is the third, enucleation. The injection of Iodine can be of real service only in the single, thin-walled cyst with thin contents. In this class of cases 75 per cent of recoveries have been recorded. It has mostly its lack of danger to recommend it, though even here death and severe asphyxia have followed in a few cases; paresis of the recurrent laryngeal in one case. The amount used is 10 to 20 grammes, depending on the size of the cyst. The tumor usually enlarges first and then gradually disappears.

The incision and drainage has not a great deal to recommend it. It is not of course a very extensive operation, but it takes some time to heal, and then leaves a rather ugly scar. The only dangers are hemorrhage from the cyst wall, and a general infection of the goitre. This method can not be employed where there are calcareous deposits.

The enucleation is a sure cure and, with a good technique, a safe method. As a rule it can be done without much hemorrhage, though in a small percentage of cases many ligatures are required. If enucleation is impossible on account of previous inflammation extirpation is the method to be selected.

Kocher has performed over one thousand extirpations, and, if he excludes the extirpations for malignant diseases, he has 870 cases with but 11 deaths, or a mortality of only 1 per cent. In his clinic he has performed 272 consecutive extirpations without a single death. After the first 100 cases he never had a case of cachexia strumaprima develop.

The good results obtained by a few surgeons led to many extirpations of the thyroid by surgeons in general, even for

purely cosmetic effects. It was then that an opportunity was offered to study the effects of complete extirpation. Many of the patients developed severe mental disturbances, others peculiar tetanic convulsions, some had severe pains in the extremities followed by contractures. The most of these ill results were found in women. Von Eiselberg found that 23 per cent had tetany. These results never occurred where part of the thyroid remained. Three-fourths can be removed with safety. Tetany developed at times where four-fifths of the gland had been removed. Recurrence after extirpation seldom takes place.

Of struma at the base of the tongue fifteen cases have been recorded. The tumors varied in size from that of a cherry to that of an egg. The thyroid proper is often lacking in these cases, so after extirpation myxedema may develop. If the thyroid is present extirpation is the treatment.

The great majority of cases of exophthalmic goitre operated upon were improved, a small number noticed no improvement, and in a very few the condition was rendered worse, or the patient died. The dangers, however, of extirpation in exophthalmic goitre are greater than in ordinary cases.

Warren says the eventual results after thyroidectomy are very encouraging, but severe nervous symptoms are apt to arise during the first few days after extirpation, occasionally leading to death. These are ascribed to the extreme irritability of the nervous system in Grave's disease. One of his cases developed a temperature of 106 and a pulse of 204 the first evening, but made a good recovery. In a second case the temperature rose and the pulse fell on the fourth day and the patient died in a few hours.

To sum up the treatment, we find internal medication in the form of some preparation of Iodine or Thyroid extract and the external application of Iodine salve or parenchymatous injections of Iodine, or 5-per-cent solution of Carbolic acid, useful in the majority of the severe, diffuse hypertrophic varieties recently developed in young individuals.

The Thyroid extract is useful in atro-

phy or absence of the thyroid, myxedema and tetany, but of no avail in Basedow's disease. Natrum phos. is best in the latter.

Parenchymatous injections of Iodine or Iodoform emulsion are always useful in recent, soft, localized hypertrophies, i. e., not involving the whole lobe. Electrolysis promises something in the vascular varieties where injections are dangerous. The fibrous and calcareous goitres as well as cysts and firm nodular adenomata and old goitres require more drastic measures. The cysts are to be treated by incision, drainage, aspiration and injections of tincture of Iodine, or, better still, by enucleation if previous inflammation has not rendered this impossible; the other tumors by extirpation, if enucleation is impossible.

Basedow's disease and aneurysmatic goitres are best treated by ligation of the thyroid arteries, the former only after failure of a thorough course of medical treatment. Complete extirpation of the thyroid gland, except for malignant disease, is an unjustifiable operation. Extirpation has largely given way to enucleation.

3034 MICHIGAN BOULEVARD.

PHYSICAL DIAGNOSIS OF THE CHEST.

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TOPOGRAPHY OF THE CHEST.

For purposes of description in physical diagnosis the surface of the chest is divided into various regions by means of horizontal, perpendicular and oblique lines. The location of these lines is determined by fixed points on the bony skeleton and other structures.

Method. — In order to define the various regions for purposes of study the student should select a subject with a well-formed chest and by means of a der-

(Note. — These lessons in physical diagnosis, in being given to the class, are amplified, and rendered graphic by blackboard illustrations, charts, and demonstrations on the human subject.)

matograph pencil trace on the skin the lines here described.

LINES OF THE ANTERIOR SURFACE.

1. Draw a line corresponding to the supra-sternal notch, from one sterno-clavicular articulation to the other. — Line 1.
2. Draw a line along the upper border of each clavicle from its articulation with the sternum to a point corresponding to the junction of its middle and outer thirds. — Line 2.
3. Draw a line upwards along the anterior border of each sterno-mastoid muscle from the sterno-clavicular articulation to a point corresponding to the level of the cricoid cartilage. — Line 3.
4. Draw a line obliquely downward and outwards from the top of Line 3 to the outer end of Line 2—Line 4.
5. Draw a line horizontally across the front of the neck on a line with the cricoid cartilage, joining the upper ends of Lines 3, 3 — Line L.
6. Draw a line along the lower border of each clavicle from the sterno-clavicular articulation to a point corresponding to the junction of the outer and middle thirds. — Line 6.
7. Draw lines corresponding to each edge of the sternum (Sternal Lines) from the sterno-clavicular articulation perpendicularly downwards to the level of the xiphoid cartilage. — Line 7.
8. Draw a line on each side from a point corresponding to the junction of the middle with the outer thirds of the clavicle perpendicularly downwards to the lower border of the ribs (Anterior-Axillary Lines) — Line 8.
9. Draw a line corresponding to the level of the upper border of the third rib horizontally across the chest from one anterior-axillary line to the other. — Line 9.
10. Draw a line on each side outward and slightly downward from a point corresponding to the junction of the cartilage of the seventh rib with the sternum to the point, where the Anterior-Axillary line crosses the rib. Complete Line 10 by a short horizontal line between its inner ends. This line will correspond to the

symphysis of the xiphoid cartilage and the gladiolus. — Line 10.

Note. — The junction of the cartilage of the seventh rib with the sternum is at the line of the symphysis of the xiphoid cartilage with the gladiolus of the sternum.

11. Draw a line on each side from a point corresponding to the junction of the cartilage of the seventh rib with the sternum curving downwards and outwards along the border of the costal arch as far as the lower end of the Anterior-Axillary line. — Line 11.

**NAMES OF THE REGIONS
ON THE**

ANTERIOR SURFACE OF THE CHEST.

The various lines described divide the anterior surface of the chest into thirteen regions, which have the following names:

On the Right Side.	In the Middle Line.	On the Left Side.
Supra-Clavicular Region.	Supra-Sternal Region.	Supra-Clavicular Region.
Clavicular Region.	Upper Sternal Region.	Clavicular Region.
Infra-Clavicular Region.	Lower Sternal Region,	Infra-Clavicular Region.
Mammary Region.		Mammary Region.
Infra-Mammary Region.		Infra-Mammary Region.

CONTENTS OF ANTERIOR REGIONS.

The anterior regions of the chest contain the following organs and structures:

1. The Trachea. — It begins at the sixth cervical vertebra; seven or eight rings of the trachea are above the sternum. The trachea has a direction downward and backward, receding from the surface as it descends. Just above the sternum it is an inch and a half from the skin.

2. Thyroid Gland. — The isthmus of the thyroid gland lies over the 2d, 3d and 4th rings of the trachea.

3. Esophagus. — It lies behind the trachea; it begins at the intervertebral disc between the 5th and 6th vertebrae; at its commencement it is in the median line; it inclines to the left as far as the supra-sternal notch.

4. Arteria Innominata. — This vessel encroaches

upon the region very slightly at the lower and inner angle of the right side.

Aorta. — The arch of the aorta may encroach very slightly on the lower border, and be felt by firm downward pressure.

Nerves. — The recurrent laryngeal nerves; one on each side, lie in the grooves between the trachea and the esophagus.

THE SUPRA-CLAVICULAR REGIONS.

Right Supra-Clavicular Region.

1. **Apex of the Right Lung.** — The apex of the lung rises above the clavicle to the height of an inch and a half; in persons with long necks, two inches. It is covered by the clavicular origin of the Sterno-mustoid, the Sterno-thyroid and a part of the Scaleni anticus muscles. It is crossed by the subclavian artery in the first part of its course.

2. **External Jugular Vein.** — Its course is on a line from the angle of the jaw to the middle of the clavicle.

3. **The Anterior Jugular Vein.** — It runs along the front border of the Sterno-mustoid muscle.

4. **Subclavian Artery.** — It is near the outer border of the Sterno-mustoid, about an inch above the sternum.

5. **Carotid Artery.** — It lies under the inner edge of the Sterno-mustoid muscle, and parallel with it.

Left Supra-Clavicular Region.

1. The apex of the left lung rises somewhat higher above the clavicle than does the apex of the lung of the opposite side.

2. The other parts are similar to those on the opposite side, and bear a like description.

Right Clavicular Region.

1. **Lung Substance.** — From the Sterno-Clavicular articulation, extending to the right about two inches. The first rib is interposed between the clavicle and the lung.

2. **Innominate Artery.** — It lies back of the right sterno-clavicular articulation.

3. **Subclavian Artery.** — From the region of the sternal end of the clavicle it passes over the first rib.

4. **Recurrent Laryngeal Nerve.** — Near the sternal end of the clavicle it passes behind the right subclavian artery.

Left Clavicular Region.

1. **Lung Tissue.** — As on the right side.

2. **Carotid Artery.** — It lies behind the left Sterno-clavicular articulation.

3. **Subclavian Artery.** — As on the left side.

THE INFRA-CLAVICULAR REGIONS.

Right Infra-Clavicular Region.

1. **Lung.** — The upper lobe of the right lung throughout.

2. **Main Bronchus.** — Behind the second costal cartilage.

3. **Aorta.** — A portion of the arch behind the second costosternal articulation.

4. **Vena Cava.** — A portion of the superior vena cava, to the right of the edge of the sternum.

5. **The Heart.** — A small portion of the right auricle in the lower inner angle of the region.

Left Infra-Clavicular Region.

1. **Lung.** — The upper lobe of the left lung throughout.

2. **Main Bronchus.** — A little below the second costal cartilage.

4. **Heart.** — The base of the heart extends into this region slightly at the lower and inner angle.

3. **Pulmonary Artery.** — A portion of the pulmonary artery behind the second costosternal articulation.

1. **Lung.** — The borders of the lung of either side enters on a line with the second rib, and extends downwards and inwards to the mesian line at the level of the third rib.

The Upper Sternal Region.

2. **Trachea.** — In the middle line as far down as the line of the articulation of the second rib, where it bifurcates.

3. Aorta. — The ascending portion of the aorta in the lower part of the region; the transverse portion crosses on a level with the second rib.

4. Innominate Artery. — At the second right costo-sternal articulation.

5. Right Auricle. — A portion of the right auricle lies in the lower and inner angle.

6. Pulmonary Valves. — On the left edge of the sternum, at the articulation of the 3d costal cartilage.

CONTENTS OF THE MAMMARY REGIONS.

The Right Mammary Region.

1. Lung. — Throughout the entire region.

2. Liver. — In the lower portion of this region; the upper line of the dome of the liver rises as high as the fourth interspace; it is covered by lung and deep-seated.

3. Right Auricle. — A portion of the right auricle lies in the upper and inner angle of the region.

4. Right Ventricle. — A portion of the right ventricle lies along the inner border of the region, between the third and the fifth ribs.

5. Diaphragm. — Over the liver, it rises as high as the fourth interspace.

Left Mammary Region.

1. Lung. — Lung tissue in this region, excepting in the cardiac triangle. The border of the lung leaves the sternal line on the level of the fourth rib; the edge extends downwards and outwards to the outer end of the fifth cartilage, then obliquely downwards and inwards to the lower border of the sixth costal cartilage, at its outer end, then outward and downward again. The fissure between the upper and lower lobes begins at the fifth interspace and passes upwards and backwards.

2. Heart.

(a) Left Auricle. — In the upper and inner angle of the region, lying deep.

(b) Left Ventricle. — On the left border of the heart from the third rib to the apex.

(c) Apex of Left Ventricle. — In the fifth interspace one inch to the right of the mamillary line and about two inches below the nipple.

Variations. — The location of the apex is (1) higher in the infant — 4th interspace; (2) lower in the aged; (3) it is also affected by the posture of the body.

(d) Right Ventricle. — A portion between the meso-sternal line and the line of the inter-ventricular septum.

(e) The Nipple. — Its position varies; it is usually on the fourth rib at the junction of the costal cartilage with the rib. In some subjects it is in the fourth interspace.

CONTENTS OF THE LOWER STERNAL REGION.

1. Lung. (a) On the right side of the median line, lung tissue.

(b) On the left side of the mesian line lung tissue from the upper border of the region down to the level of the fourth sterno-costal articulation.

2. Heart.

(a) Right Ventricle — the greater part.

(b) Left Ventricle — a small part.

(c) Right Auricle — a part, in the right upper angle.

3. Valves.

(a) Mitral Valves. — Deeply located at a point corresponding with the upper border of the fourth costal cartilage near the left edge of the sternum.

(b) Tricuspid Valves. — At a point in the mesian line of the sternum, between the fourth costo-sternal articulations.

(c) Aortic Valves. — At a point behind the left edge of the sternum on a level with the lower border of the third rib.

4. Vessels.

(a) The Aorta — its origin.

(b) The Pulmonary Artery — its origin.

5. Diaphragm, — at the point of attachment of the pericardium.

6. Liver. — A small portion.

7. Stomach. — Sometimes a small portion of the stomach.

CONTENTS OF THE INFRA-MAMMARY REGIONS.

Right Infra-Mammary Region.

1. Lung — on deep inspiration.
2. Liver — the greater part of the right lobe.

Left Infra Mammary Region.

1. Lung — on deep inspiration.
2. Liver — a portion of the left lobe.
3. Stomach — Traube's semi-lunar space.
4. Spleen — sometimes.

THE LATERAL REGIONS.

In order to define the Lateral Regions of the Chest, trace the following lines :

1. Draw Anterior Axillary line. — Line 1.
2. Draw the Posterior Axillary line — from the outer angle of the scapula perpendicularly downwards to the border of the ribs. — Line 2.
3. Continue the line forming the lower boundary of the Mammary Region, extending it from the Anterior Axillary line to the Posterior Axillary line. — Line 3.
4. Draw a line along the border of the ribs, joining the lower end of the Anterior Axillary line with the lower end of the Posterior Axillary line. — Line 4.

These lines form the boundaries of two regions, the —

1. Axillary Region.
2. Infra-Axillary Region.

The superior boundary of the Axillary Region is the axilla.

CONTENTS OF THE LATERAL REGIONS.

The Axillary Regions.]

On both sides the Axillary Regions contain lung substance, with the main bronchi deeply seated.

Right Infra-Axillary Region.

1. Lung. — The lower edge of the right lung extends as far as the eighth rib in the axillary line.
2. Liver. — The greater portion of the right lobe.

Left Infra-Axillary Region.

1. Lung. — The lower edge of the left lung extends to the eighth rib in the axillary line.
2. Spleen. — It extends from the ninth to the eleventh ribs, near the anterior axillary line.

THE POSTERIOR REGIONS.

In order to define the Posterior Regions of the chest trace the following lines : —

1. Draw a line — on each side — from the outer angle of the scapula perpendicularly downward as far as the border of the ribs — the Posterior Axillary line. — Line 1.
2. Draw a line — on each side — from the spinous process of the 6th cervical vertebra obliquely outward and downward to the outer angle of the scapula. — Line 2.
3. Draw a horizontal line across the back of the chest from one Posterior Axillary line to the other on a level with the inferior angles of the scapulae and the 7th dorsal vertebra. — Line 3.
4. Scapular Line. — Draw a line — on each side — corresponding to the inner edge of the scapula from Line 2 perpendicularly downward to the horizontal line at the 7th dorsal vertebrae. — Line 4.
5. Draw a line — on each side — along the spine of the scapula, from the scapular line to the outer angle. — Line 5.
6. Draw a line across the lower part of the back, on a level with the spine of the 12th dorsal vertebra from the end of one Posterior Axillary line to the other.
7. Draw a line along the spinal column from the spinous process of the 6th cervical vertebra to the spinous process of the 12th dorsal vertebra — the Vertebral line.

These various lines divide the back of the chest into four lateral regions, on each side, which have the following names : —

Left.

Supra-Scapular Region.
Scapular Region.
Infra-Scapular Region.

Left Inter-Scapular Region.

Right Inter-Scapular Region.

Right.

Supra-Scapular Region.
Scapular Region.
Infra-Scapular Region.

CONTENTS OF THE POSTERIOR REGIONS OF THE CHEST.

1. Supra-Scapular Region. — The apex of the lung, on either side.
2. Scapular Region. — Lung tissue, on either side.
3. Inter-Scapular Regions.
(a) Right. — Lung tissue; the right

bronchus, at the level of the fourth vertebra; bronchial glands; the incisure between the upper and middle lobes of the right lung begins at the level of the 5th dorsal vertebra, passing downward and outward. The apex of the middle lobe is opposite the 5th vertebra.

(b) Left. — Bronchial glands; the aorta; the thoracic duct; the esophagus; lung tissue; the left bronchus; at the level of the 4th vertebra; the incisure between the upper and lower lobes of the lung beginning at the level of the 5th dorsal vertebra, extending outward and downward; the apex of the lower lobe of the lung opposite the 5th vertebra.

4. Infra-Scapular Regions.

(a) Right. — Lung down to the 10th rib; liver, uncovered by lung, from the 10th to the 12th ribs; a small portion of the kidney, as high as the 11th interspace.

(b) Left. — Lung to the 10th rib; the Spleen in the outer part of the region, from the 9th to the 11th ribs; the Aorta, close to the spine; the head of the Kidney, as high as the 11th rib. On deep inspiration the lower border of the lung descends to the 11th rib, in the complementary space of the pleura.

The Homeopathic Medical Society of Chicago.

The Homeopathic Medical Society of Chicago will meet in Parlor L 38, Great Northern Hotel, Thursday, February 21st, at 8:30 p. m. The program includes a paper by Dr. J. P. Cobb on "Rheumatic Diathesis," to be discussed by Drs. R. N. Tooker and O. C. Snyder. One on "Lycopodium," by Dr. A. C. Cowperthwaite, discussion to be opened by Dr. J. E. Gilman. One by Dr. Orrin L. Smith, on "General Practitioner's Examination of the Nose and Throat," discussion to be opened by Dr. P. Burmeister.

President, J. R. Kippax, M. D. Secretary, Dr. Wilson H. Smith.

Subscribers

Who have received bills for the Era for 1900 will kindly remit on receipt of this issue. Those more than two years in arrears will receive drafts.

SELECTED

From the "Chironian."

THE HOMŒOPATHIC THERAPEUTICS OF TYPHOID FEVER.

WITH SPECIAL REFERENCE TO THE VARIOUS STAGES OF THE DISEASE AND THEIR COMPLICATIONS.*

BY WILLIAM H. DIEFFENBACH, M. D.
NEW YORK.
(Continued.)

Nitric Acid, 3d Stage.—Nitric Acid presents a condition of much exhaustion with yellowish white tongue studded with little blisters or may be dry and brown. The special features directing its use are its green slimy or purulent, offensive stools with bright red hemorrhage from the bowels, tender abdomen, with fainting on the slightest motion and splinter-like pains.

Opium, 3d Stage.—The picture presented by Opium in Typhoid fever is unpromising—there is threatening paralysis of the brain, dropping of the lower jaw, unconsciousness, loud stertorous breathing, dark or purplish hue of the face, pulse full and slow and may, in profound attacks, have hot sweat on the body. Constipation, due to paralysis of the muscular walls of the intestines, will also be present.

Helleborus Niger, 3d Stage.—In Helleborus a perversion or blunting of the whole sensorium will be noted. There is inco-ordination of muscles or paralysis with collapse and subnormal temperature, a pale, almost cold face, with pulse faint, weak and thready. We also find the dry tongue, yellowish with red edges, the characteristic dark soot about the nostrils, offensive breath, gurgling of fluids in the oesophagus and stomach, dropsical symptoms, carphology—slow in answering questions, when aroused wants nothing, but drinks water with great avidity; scanty urine, may be suppressed, and aggravation of fever 4-8 p. m. (like Lycopodium 4-8 p. m. and Apis 4-6 p. m.).

It is especially indicated when meningeal irritation is manifested—there is corrugation of the muscles of the forehead with chewing or grinding of teeth, boring of the head into the pillow, automatic motion of limbs and the sudden meningeal shriek.

Arum Triph., 3d Stage.—*Arum Triph.* will especially be called to mind when carphology is very pronounced—there is depression of the vital forces—prostrating weakness—picking at the bed-clothes and boring of the nose, with picking of the lips until they bleed. The patient is restless, wants to escape, is unconscious of what he is doing or what is said to him—has putrid odor from the mouth, dark, yellow, watery diarrhoea and suppression of urine.

China Off., 3d Stage.—*China* will be found useful especially in malarial complications and in the last stages, when, from excessive loss of fluids the patient is profoundly prostrated, with insomnia and apathy. There is much loss of flesh, night sweats, chilliness, small, feeble pulse, pale face, contracted pupils, dry mouth, with slimy, bitter taste, inflated abdomen, which is tender and painful, enlarged spleen and excessive diarrhoea worse at night. *China* may also present a clean tongue with varying appetite and constipation. In “intermittent” hemorrhages it has proven curative where many other drugs having special control over hemorrhage were useless.

Carbo. Veg., 3d Stage.—*Carbo. Veg.* will be chosen especially in the last stages of Enteric fever and many apparently hopeless cases owe their recovery to this seemingly harmless and inert remedy. The patient is in a collapsed, non-re-active state, the breath is cold, the skin cold and blue, covered with dark ecchymoses, the lower extremities cold and bathed with icy sweat.

The pulse is intermittent and thready, all discharges offensive, the abdomen distended with excessive flatulence and there may be profuse hemorrhages of dark blood. The respiratory difficulties are exhibited in the peculiar insistence of the patient in asking to be “fanned” and this symptom may often give the clue to the choice of the remedy with gratifying results.

After the third week and during convalescence, the careful prescriber will be called upon to select various remedies as presented by the totality of the symptoms observed, the removal of which will slowly but surely lead to complete recovery.

The complications of typhoid fever are the features chiefly to be dreaded in the course of this disease. In case of hemorrhage, especially of the passive variety, *Terebinth*, *Hamamelis* and *Secale* are first to be thought of.

Venous Hemorrhage. — *Terebinth* has hemorrhages from the nose or anus, usually dark, also hematuria with albuminaria, excessive tympanites and often retention of urine or dysuria. The urinary examination will also often show catarrhal or croupous nephritis, and sometimes cystitis, as complications.

Hamamelis. — *Hamamelis* has hemorrhages of dark, venous blood — tendency to bleed — tongue moist, dark petechiae, bruised feeling in abdomen and apathetic condition.

Secale. — *Secale cornutum* is indicated when the flow of blood is thin, dark and persistent and in thin, poorly nourished adynamic patients with tingling in the limbs, flushes of heat, coldness of body and, nevertheless, desire to throw off bed-clothes.

Crocus Sat. — *Crocus Sat.* has venous hemorrhages in long, dark, stringy clots and may have its characteristic “sensation of something alive” in the abdomen.

Lach. and Crotalus. — *Lachesis* and *Crotalus* have hemorrhages of dark decomposed blood with collapse.

Leptandra. — *Leptandra* has stools of black, decomposed blood like pitch, with biliousness.

Alumen. — *Alumen* hemorrhage from the bowels in large clots, this remedy especially, being very efficacious.

In active hemorrhages, *Millefolium*, *Ipecac*, *Ledum*, *Geranium Mac.*, *Merc. Cor.*, *Thlaspi Bursa Pastoris* and *Veratrum Alb.* must be thought of. *China Off.* is also indicated in both venous and arterial depletion.

Arterial Hemorrhages. — *Millefolium*, has flushed face, headache, full, wiry pulse and bright, red, frothy, painless hemorrhages. *Ipecac*, bright red profuse hemorrhage with heavy breathing and nausea and vomiting. *Ledum*, has hemorrhages of bright red, frothy blood with coldness. *Geranium Maculatum*, has a dry mouth, tip of the tongue feels as though burnt, with bright red hemor-

rhages associated with offensive diarrhoea.

China Off., when the hemorrhages are intermittent, associated with ringing in the ears, weakness and prostration. The hemorrhages of China are usually venous but may be arterial.

Thlaspi Bursa Pastoris is indicated when the hemorrhage is profuse, especially referable to haematuria with uric acid diathesis. This drug has frequently stopped hemorrhages when others have failed. Its exact symptomatology has not as yet been noted.

Merc. Corr. may be useful when dysenteric conditions supervene with its other characteristics.

Veratrum Album is the remedy "par excellence" when the hemorrhages are violent with excessive prostration, temperature 106-107, pulse feeble or almost imperceptible, face cold and sunken, cold sweat on face and forehead, great dyspnoea, the patient gasping for breath, the extremities cold and covered with icy, clammy sweat. The Veratrum Album and Carbo. Veg. pictures present similar shadings, but the characteristic symptom "cold sweat on face and especially on the forehead," and the excessive hemorrhage, with possibly the presence of the rice-water stools of Veratrum would determine its choice.

Peritonitis. — If signs of peritonitis develop, the range of remedies is varied. In the acute stage Aconite is usually suggested when there is a chill, fever with restlessness and fear of death, pulse full and frequent, abdomen swollen, tender to touch, with cutting, tearing pain and may have numbness and tingling sensation. Belladonna will be thought of when there is intense arterial congestion of head and face with hot, sensitive distended abdomen, sharp, colic-like pain, worse from the least jar, pains may come and go quickly, constriction of the navel as if pinched, with bloody, slimy diarrhea. Cantharis has burning pain, tender, sensitive abdomen, especially in the inguinal region; tenesmus of the bladder and possibly its characteristic urinary symptoms. Apis presents stinging pain or knife-like stabs, drowsiness, but can't sleep, due to pain and nervousness and characteristic

scanty, dark albuminous urine and "wide-open anus." Arsenicum has the distended abdomen pronounced, with burning pain, hot, dry skin, intense, anxious restlessness and the after midnight aggravation with characteristic thirst and worse from heat. "When effusion commences Bryonia is the sheet anchor." Here we find stitching, lancinating pains, worse from slightest motion, causing the patient to scream with pain, and the other Bryonia Symptoms, constipation, characteristic thirst, pain, better from slight pressure and warmth, would complete the picture.

Kali Carb. would find application if the stitching pain was continuous, whether the patient moves or not, with chilliness and 3 a. m. aggravation. Rhus. Tox. has been used successfully in typhoid fever with peritonitic complications, its typical restlessness, "tearing" pains, characteristic tongue and stool, which may be mixed with blood, suggesting its choice.

Carbo. Veg. would be called for in desperate non-reactive states with excessive tympanites and flatulence, paralysis of intestines with burning pain, coldness and collapse.

Respiratory Complications are almost always present, including bronchitis, hypostatic congestion of the lungs, lobar pneumonia or oedema of the lungs.

In the latter Anti Tart. is the sovereign remedy, where there is much dyspnoea with loud coarse rales, rattling of mucus in the chest which is difficult or impossible to expectorate. Veratrum Alb. has no marked difficulty in expectorating mucus and has "cold sweat on forehead," while in Lycopodium mucus is abundant and apt to regurgitate or stuff the nose; we would also expect to find the fan-like motion of "alae nasi" and the 4-8 p. m. aggravation in the latter drug.

In hypostatic congestion the drugs having this condition, Bella., Baptasia, Ferrum Phos. and Rhus Tox., if properly pictured, will be found most useful. In the more serious lobar pneumonia, Bryonia, when not contra-indicated by other symptoms, will be first choice.

The Use of Digitals in Cardiac Affections.

Dr. Hobart Amory Hare (*Therapeutic Gazette*, Jan., 1901) thus sums up the subject:

It seems hardly necessary to state that Digitalis is the best of all drugs in the treatment of many cardiac disturbances, but on the other hand it is necessary to state that it is often used in cases in which it is not only useless but harmful, and that it is employed in many instances in such a manner as to indicate ignorance of its real value in medicine. In the first place, it is abused in that it is employed as if it were qualified to heal the lesion and close the leak, or in the case of degeneration produce a new muscular apparatus. The most that Digitalis can do in any case is to increase the nutrition of the heart muscle and so to aid in the maintenance of its ability to work and in the development of the needful hypertrophy of the heart muscle. At best it is but a splint to help broken compensation.

The second mistake in its use is its administration in too large dose. Not uncommonly it is given in the dose of twenty minims of the tincture three or four times a day, which in itself is as a rule too large; but worse still, it is continued in this dose till its effect is cumulative, because being slow in its action and tenacious in its effects its early doses are still producing an effect when the following doses are given. There is nothing uncanny or odd in this so-called cumulative effect of digitalis, save that the results to the patient are sometimes disastrous. Any drug which is tenacious or prolonged in its influence will do the same thing. The bromides, for example, if given day after day, in full dose, not only cause the effect ordinarily produced by a single dose, but in addition produce a cumulative influence in that the effect of the last dose is added to the effects of its predecessors long before the effects of these have passed away. It is simply a question of pouring in more drug before that already present is passing away in its influence. Rarely it may be necessary in urgent cases to give a few large doses at the beginning of the treatment for the purpose of speedily obtaining the desired effect; but after this the dose should be

cut down from one-half to one-quarter the original size and so maintained, or, as is so often done by skilled practitioners abroad, the drug is stopped for a period every eight days in order to enable the economy to get rid of what is already present. A far better method of giving Digitalis is to use moderate doses till signs of its physiological influence are manifest, when it may be maintained or slightly cut down.

If the dose of Digitalis is too large in the twenty-four hours it often happens that the patient passes through three stages of treatment. At first, when the effect of the drug is beginning to be felt, the patient improves, and then, after some days of comfort, begins to lose ground and even to have greater cardiac disorders than before, owing to inco-ordination of the ventricles and auricles and the imperfect or abortive systolic contractions. If the lesion be a valvular one, this disorder may actually increase instead of diminishing the leak, and greatly increase the patient's discomfort.

A third mistake in its use is its too frequent administration, in that it may be ordered every three hours when every eight hours would be better. Unless the individual dose is very small, it is better to give the drug three times in the twenty-four hours instead of oftener.

A fourth mistake is to give this drug in cases of high arterial tension without first or simultaneously reducing this tension to an approximately normal degree. In many cases of failing heart the difficulty is not that the heart muscle cannot stand the strain of normal exertion, but is continually called upon to stand a strain far in excess of the normal. While stimulating and strengthening the heart muscle may be advantageous, it is manifest that the best thing to do is to reduce its work. Our object should be to reduce the resistance, and then, if it be needed, to use cardiac medicaments. It is not necessary to add that for this purpose the nitrites are the remedies of choice. There can be no doubt that this is one of the cardinal facts in cardiac therapy, not only in regard to the use of cardiac stimulants as a class, but in relation to the use of digitalis in particular, since it, of all the cardiac

stimulants, powerfully contracts the vessels and tends to raise tension at a time when this portion of its physiological action is most undesirable. But the mistake of giving Digitalis in full doses in cases of high tension does not end here, for if there be atheroma present, the increase in arterial tension may cause an apoplexy or hemorrhage elsewhere.

Still a fifth mistake in regard to the use of Digitalis is its employment in cases of advanced fatty degeneration. In such cases the absence of normal muscle fiber upon which the drug can produce an effect, the almost unavoidable rise of arterial tension, and the consequent strain upon the feeble heart, make it unwise to use it except under exceptional circumstances.

There is one condition of valvular disease in which it has been taught by some authorities that Digitalis is contraindicated, namely, in aortic regurgitation, on the ground that the drug by prolonging diastole increases the period during which regurgitation can take place. This has been strenuously contradicted by equally good observers, and the whole matter threshed over pro and con by able disputants. The truth of the matter is that it is generally contraindicated, but may be indicated, and that we cannot make a hard and fast rule entirely forbidding it. Given a case of great dilatation, with muscular feebleness, it may do good particularly if the vascular effect is put aside by the use of the nitrites. In other instances it must be tried experimentally to see how it will suit the individual case, and when this experiment is made, the patient should be put to bed, thereby decreasing the danger of sudden death, which is a constant danger in aortic regurgitation of a marked type, and is distinctly increased by Digitalis if it happens to greatly increase the reflux into the ventricle.

There is still another valvular condition in which Digitalis sometimes fails to agree, namely, in certain cases of mitral regurgitation in which for some unexplained reason the use of the drug seems to increase the reflux into the auricle instead of aiding in increasing the output into the aorta. In these cases the signs of pulmonary engorgement and conges-

tion of the right side of the heart are the signs which tell us to withdraw the drug.

Finally, it is not to be forgotten that Digitalis is often contraindicated by the presence of marked gastric disturbance, but it is a noteworthy fact that it produces vomiting as a sign of its overaction, and therefore commonly after it has been given too freely. This influence probably depends upon an irritant effect of the drug on the stomach, and an influence exerted on the vomiting center in the medulla.

There is another point in connection with the use of Digitalis which practitioners on this side of the Atlantic often overlook, namely, the simultaneous employment of blue mass in repeated and full doses. The manner in which this valuable drug acts under these conditions is not always clear. When the liver is inactive because of imperfect circulation of blood, and is swollen and engorged, a full purgative dose of blue mass naturally relieves this congestion and promotes hepatic functional activity. But other drugs which purge the patient rarely produce equally good effects, and it would seem probable that the relief of liver engorgement is accompanied by an increase in its ability to destroy toxic materials in the blood or to aid in their elimination through the bile. Probably the increased urinary flow under this treatment not only eliminates fluid toxic material as well by way of the kidneys. In cases in which the liver is enlarged and swollen, the portal circulation impaired, and the digestion poor, blue mass is not only a hepatic but a true cardiac remedy, particularly if the right side of the heart is in trouble and cardiac dropsy is manifest. In some patients the administration of Digitalis fails to do any material good till blue mass is freely given.

Passing from Digitalis to the next member of this group of heart remedies, we come to Strophanthus. There are three facts which seem worthy of special note concerning the use of this drug. It is not by any means as useful as Digitalis, yet will sometimes act very well when Digitalis has failed. It is always to be preferred to Digitalis when a state of high vascular tension is present, because it does not contract the vessels as does

Digitalis. Again, unlike Digitalis, in many cases it is given in too small doses rather than too large ones, and unfortunately, when given in large enough doses to be effective, not only produces irritation of the bowels but an annoying diarrhea. Finally, it nearly always, in my experience, acts better in children than does Digitalis.

(Note. — The action of Digitalis is to slow the pulse by prolonging the diastolic period of the heart. The dosage of the drug should be only sufficient to accomplish this result. In the ordinary case of mitral disease with dilatation, in which condition Digitalis is most useful, a dose of minims v, given three times daily, is usually sufficient. In some cases the $\text{ix minims x, t. i. d.}$, will accomplish the result. Give the smallest dose that will slow the pulse and Digitalis is doing all that can be required of it. — Ch. G.)

Treatment of Bronchial Affections by Posture.

Jacobson states that the primary indication in the treatment of bronchial affections is to free the bronchial passages of mucus, and that this a difficult task. In bronchiectasis especially is this a thankless undertaking. Our chief reliance in these cases is upon expectorants, and these substances being irritants, tend to provoke fresh secretion to replace that which they assist in expelling.

As bronchial affections of all kinds are essentially bilateral, nothing can be expected from pulmonary surgery, which can deal only with unilateral processes.

Quincke, one of the leading advocates of pneumotomy when the latter is at all practicable, is the first to recognize its helplessness in bronchiectasis, etc. It is this author who has suggested the mechanical, non-operative treatment of those pulmonary (bronchial) affections in which surgical interference is excluded.

Quincke would allow the pent-up bronchial secretions of bronchitis, bronchiectasis, etc., to escape from the lungs by their own weight. To accomplish this the patient must lie flat on his back, while the foot of the bed must be elevated.

This feature is not entirely new in medical literature, for scattered allusions to it may be found in the writings of Traube,

Niemeyer, Herrlich, Anderson, etc.; but until the labors of Quincke no one ever attempted to place this resource on a systematic basis.

Ordinarily we find in bronchiectasis that the cavities slowly fill, and that not until they overflow do we see expectoration result. It is natural, therefore, that the time for expectoration in this disease is in the morning, after a night's sleep. Now if at any time in the day the patient is submitted to Quincke's postural treatment the bronchiectases are quickly evacuated. As a collateral result, the frequent emptying of these cavities restores their mucosa to its natural irritability, and thus favors a permanent cure.

If a foetid bronchitis is present, the postural treatment directly antagonizes the tendencies to stagnation and decomposition.

Quincke's method should be limited to chronic bronchial affections, under which circumstances we find atony of the musculature and loss of reflex irritability of the musosa, both due to absence of good bronchial drainage.

Cylindrical bronchiectases doubtless improve more rapidly than the sacculated varieties.

With regard to the technique of Quincke's method, as practiced by the author, the patient is required to lie flat in bed for one hour, during both morning and evening. When the sputum shows signs of diminution, one (morning) hour will suffice. At first the foot of the bed is not raised, but with each succeeding day it is elevated little by little. Bricks are used for this purpose. An apparatus has been constructed by which the foot of the bed may be raised to the height of fourteen inches without unpleasant consequences.

As a caution it should be repeated that this method is contraindicated in acute bronchial affections and in large pulmonary abscesses.—Med. Review.

(Note. — We have for years used this method in various bronchial affections, and with very satisfactory results. We do not limit its employment to chronic cases, for it is equally useful in children as well as in adults, in acute affections in which there is much bronchial secretion to be raised.—Ch. G.)

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CHAR. ADAMS, M. D., EDITOR

CHICAGO, FEBRUARY, 1901

MEDULLARY NARCOSIS.

We have in a previous article called the attention of our readers to the subject of "medullary narcosis" and therein expressed our doubts as to the advisability of forsaking the well-established general anesthetics for the new method. Further reports on the use of intra-spinal cocainization have added nothing in its favor. In the New York Medical Journal for December 22, 1900, will be found an article by Goldan of New York on this subject as viewed from the standpoint of the anesthetist. Goldan's experience covers thirty-one cases, in all of which the technic was carried out and observations made by himself. In only one case was any difficulty noted in making the injection and this difficulty was due to ankylosis of the spine, the result of injury. Goldan says, "after having eliminated every possible source of error, that failures or incomplete successes have occurred." Further, "I can only emphasize what I stated in my first paper, namely, that cocaine acts in the spinal canal exactly as when injected into the general circulation, and in the same way as any of the alkaloid drugs, so far as dosage and idiosyncrasy are concerned."

Goldan fails to see any advantage in its use in obstetrics over chloroform, which is universally considered safe. He calls attention also to the ridiculously minor character of many of the operations and sees no reason why gas, or at least gas and ether, should not have been employed except the questionable one of convenience, which latter should never be preferred to safety. In abdominal surgery the method is most unsatisfactory; the patients often become alarmed in spite of every effort to reassure them, and then

a general anesthetic must be substituted. "It is well enough to say that a rapid operator can finish his operation before the anesthesia passes off, but often the nature of the operation requires more time, even with the most rapid operator, than the spinal cocainization gives.

Goldan maintains that the exposure to which patients undergoing the subarachnoid injection are subjected may be productive later of pulmonary troubles. He utters also a word of warning against attempts at extending the cocainization of the cord to the cervical region on account of the danger of bringing the drug to the medulla in a concentrated condition and producing death by its direct action upon the medullary centers. He considers that patients cocainized by this method are in many instances put into a condition of shock which can only be compared to profound chloroformization. "From the standpoint of time-saving, of preservation of consciousness, or of convenience, this method cannot commend itself in the vast majority of instances to either the patient or the surgeon in preference to general anesthesia by either nitrous oxide, ether, or chloroform properly selected and skillfully administered. When we consider the manifold disadvantages of intraspinal anesthesia and its few questionable advantages, we may well ask whether the use of the method, except in very rare instances, is not a step backward rather than forward."

In the Medical News (Jan. 5, 1901) Dr. G. R. Fowler of New York reports a study of eighty-one cases operated upon under analgesia obtained by subarachnoid spinal cocainization and after detailing the cases and the obtained results, from the standpoint of the operator, concludes his article as follows:

"In closing I wish to state that, in spite of my favorable experiences with spinal cocainization, I hold to the proposition that the ideal anesthetic agent is one which, with absolute safety, will render the patient entirely ob-

livious, not only to the pain of the operative procedure, but to each and all of its disagreeable features as well, including knowledge of the surroundings, the fear and prolonged dread of a fatal result during the operation itself, this being possibly enhanced in the case of a patient fully conscious, by the thought that his life hangs upon the point of the surgeon's knife, and that the slightest movement involves the greatest danger. These, together with the disagreeable incident of vomiting, to say nothing of the disgusting occurrence of involuntary urination and defecation while upon the operating-table, should be eliminated from the conscious environment of the patient, whenever possible, with absolute safety. These propositions are self-evident in all cases, but are particularly true in surgery. In obstetric practice, on the contrary, even in the case of a primipara, the patient is more or less prepared, by long looking-forward to the important and crowning event of her maternal instinct, for not only painful, but disagreeable and what under any circumstances cannot but be disgusting features of that event. Not so in surgical practice, in which the announcement of the necessity for an operation is a shock in itself, from which the patient scarcely has time to recover before being called upon to undergo the ordeal itself. While, in certain exceptional instances, the patient will dread the enforced loss of consciousness, the greatest fear on the part of the latter arises from the supposed dangers incident to the anesthetic agent. Take away this fear and the positive promise of an absolutely harmless nepenthe will far outweigh the suggestion of an experimental analgesia.

"I am impelled to make these remarks by a consideration of the matter from the standpoint of the patient's own feelings, a point of view which cannot be ignored. That the ideal anesthetic has not yet been discovered, is unhappily only too true; that this much-to-be-hoped-for event will come along the line of thought suggested by general rather than local anesthesia or simple analgesia, and through an elimination of all the disagreeable features of the surroundings, rather than a more or less transient suspension of the pain-transmitting function of the nerves involved in the operation, I am persuaded.

"At the present time we may only say that Corning's method has an undoubted sphere of usefulness in surgery. The indications for and limitations of, as well as whatever danger may attend its employment can only be determined by further trial and careful study of a large number of cases."

ORIGINAL ARTICLES

THE HEALING POWER OF CONTINUOUS IRRIGATION; A CASE.

BY JOHN W. STREETER, M. D.

CHICAGO.

PROFESSOR OF MEDICAL AND SURGICAL DISEASES OF WOMEN IN THE CHICAGO HOMOEOPATHIC MEDICAL COLLEGE.

Mrs. X., widow, aged 48, Chicago, consulted me in October, 1899, on account of a bloody discharge from the vagina which had been continuous for six years. Constant attendance upon, first, an invalid husband, and then an invalid mother, had prevented her from seeking aid for herself. She was tired, nervous and anemic, as she was fully justified in being, but she complained of little pain, and did not present the appearance of exhaustion which the protracted hemorrhage would warrant. She insisted, however, there had been no day in six years when there had not been a discharge of blood per vagina—and often quite profuse.

A very gentle digital examination revealed a friable mass filling the upper vagina; it seemed to spring from the vaginal cervix and had spread to the fornices. Only a superficial examination could be made on account of the hemorrhage which even a delicate touch produced.

From the history of the case and from the friability of the growth, I made a tentative diagnosis of cauliflower excrescence from squamous-cell carcinoma, and advised immediate operation. The patient consented and entered Street-er Hospital November 1st. Two days later I operated, assisted by Drs. Gallo-way, Low and E. C. Streeter.

I hoped to be able to do hysterectomy, but, with my patient under ether, I found that this would be impossible. A thorough examination developed a very serious condition; one which did not admit the use of knife or scissors. The disease had involved the parametrium to such an extent as to fix the uterus to the bladder and rectum immovably. The invasion of the walls of these hollow organs left no reasonable hope for success in an attempt to remove the whole of the mass

by any cutting operation. The treatment which offered the best possibility for relief was the one suggested by Marion Simms and perfected by Dr. Ely Vander-Warker of Syracuse—to slough the mass with zinc chloride. During the past twenty years I have occasionally resorted to this method, and in most cases the results have been favorable. In this case, however, a larger mass than any which I had attempted to treat was to be sloughed away; but there was nothing else to do. The sharp curette was used to remove the diseased tissue in the upper part of the vagina. When this was accomplished the entire vaginal cervix had disappeared, and in its stead was a funnel-shaped excavation reaching to the internal os. The curette was then carried into the uterine cavity and a large quantity of tissue removed; so much, indeed, that I feared that the instrument had passed the boundary of that organ.

This great cavity was irrigated with very hot water until oozing had ceased, and then packed with cotton to absorb all moisture. Cotton pellets of the size of hazel-nuts were thoroughly saturated in the zinc solution and then made moderately dry by being wrung in the folds of a towel. The zinc solution was: Zinc Chloride, one ounce; water, one ounce. The tampon was then removed and the excavation packed with the prepared pledgets as carefully as a dentist fills a tooth cavity. When filled flush with the vaginal wall a small tampon of dry cotton was placed in contact with the zinc packing. Following this, the whole of the vagina was tamponed with large pledgets of cotton well moistened with the more than saturated solution of bicarbonate of soda. The patient was put to bed with orders that the urine should be drawn every six hours, a concentrated liquid diet given, and reasonable comfort secured by the hypodermic use of morphine, when necessary.

A moderate sized slough will come away in ten days. It was sixteen days before this one detached itself. In the meantime, we became aware that large fistulae had been established between the vagina and the neighboring organs. The packing had been removed from the va-

gina on the fifth day, and on the eighth urine came in abundance per vaginam, and on the eleventh, liquid feces.

On the sixteenth day, assisted by Dr. Galloway, I removed the slough. The mass was detached and could be easily rotated upon its axis; but, on account of its size, it was with difficulty delivered through the vulva. It was made up of the whole uterus, upper part of the vagina, connective tissue, and large patches of rectal and bladder wall. There was no hemorrhage, but the cloaca which came into view was frightful to behold—a broad passage eight inches deep common to bladder, vagina and rectum. I packed it with a great shawl of gauze, sent the patient to bed and retired to my library to meditate upon a very unpleasant matter.

Several years ago Dr. Edmond Andrews published some remarkable success from persistent, continued irrigation. It was the one thing which offered hope, and I at once commenced its use. By means of a simple device the patient was made comfortable from 7 a. m. to 9 p. m., while the water was flowing. She was then packed and permitted to rest. About three barrels of hot water under low pressure ran in and out of this cloaca during fourteen hours of each day for twenty-eight days.

During the first three weeks no urine passed the urethra and no feces the anus. After that date the secretions found natural vent in slowly increasing quantities. From the twenty-eighth day irrigation was practiced three hours twice a day for a month, then one hour three times a day for another month. At the end of the third month most of the urine and some feces were passed per vias naturales, and she was ready for a small plastic operation. I found the vagina shortened to about half of its normal length, but its tissues were supple and healthy; the bladder easily retained twelve ounces of water before it overflowed into the rectum; there was no opening into the vagina from the bladder, but there was a rectal vaginal fistula, admitting my thumb, two inches above the sphincter ani. This was repaired by two rows of sutures, after having inverted a ring of

vaginal mucosa into the bowel. The result was satisfactory to the patient, though not quite so to me. I can find an opening in the rectal vaginal septum through which I can pass the sharp end of a wooden toothpick. Two or three times in twenty-four hours a small quantity of urine escapes through this opening.

At the present time, fifteen months after the operation, the patient reports general health much better than at any previous time for seven years. The bladder is competent up to twelve ounces and comfortably emptied; bowels regular, and free from distress of any kind, but she is obliged to evacuate two or three ounces of urine from the bowel about four times a day. This shows that there is a small communication between the bladder and rectum; but there is no catarrh of the bladder nor is there pain or inconvenience in voiding the urine. Physical examination shows the pelvis free from growth or induration, the vaginal scars soft and normal, and no evidence of the original disease.

Three remarkable features present themselves in this case: (a) The size and completeness of the slough. All disease tissue seems to have been cast off. (b) The escape of the ureters. That they did escape is evident, but how? (c) The wonderful reparative power of Nature under water.

2646 CALUMET AVENUE.

HEREDITY AS AN ETIOLOGICAL FACTOR IN HERNIA.

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LECTURER ON SURGICAL PATHOLOGY IN THE
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Among the numerous causes assigned as predisposing to hernia, heredity is always reckoned as the chief, or most frequent. Various figures have been given by different writers, from 25 per cent up. Berger, basing his figures on 10,000 cases, affirms that 28 per cent were traced to heredity, while Kingdow places this factor at 34 per cent.

MacReady, in his exhaustive work on "Hernia," gives figures on all conceivable phases of the subject, tracing hered-

ity in various progenitors. In one of his tables he gives the following figures:

	Male offspring. per cent.	Female offspring. per cent.
Father with rupture.....	37.1	6.4
Mother with rupture.....	33.5	12.6
Both parents with rupture.....	43.6	14.1

These figures are based on the family average of 6.

While to my mind there is no doubt about the evidence of heredity being a factor in the cause of hernia, I believe the figures given are far too high. Besides this, I would change the heredity to mean that it is productive of the tendency to rupture, which may eventually result in it or not, depending upon habits or occupation.

The following remarks relative to hernia are chiefly in reference to the acquired variety, and not the congenital. The congenital, as is well known, may appear later than the term congenital might be construed to imply; as a rule they may be distinguished from the acquired form, by their anatomy and relations, even if this (congenital) variety does not appear until the subject has reached adult life.

When we carefully consider the anatomy of the structures involved and the pathology of hernia, it does not appear to the writer that we are warranted in assuming that heredity causes such a large proportion of cases as any of the figures quoted. Berger says, "It is probable that the analogy of structure which is formed between ancestors and offspring, which shows itself in resemblance in physiognomy, creates similar conditions of inclination of the pelvis and capacity of the pelvis cavity, of resistance of fibrous ligaments and aponeurosis, of size and direction of the rings, which give passage to hernias, in fine of analogous conditions of muscular development of the abdominal walls, and one may conceive that this similarity of conformation places parents and children in almost identical conditions of predisposition and resistance as regards the causes upon which hernias depend."

Anatomy.

First, then, let us briefly outline the anatomy of the inguinal and femoral

canals. In the male, in whom inguinal variety of hernia is most frequent, we have an anatomical explanation for this; that is to say, that the inguinal canal in the male is much larger than in the female, for the passage of the spermatic cord and its addenexia, and notwithstanding the fact that this canal is naturally much stronger, being re-enforced with more intercolumnar fascia than that of the female.

In the female, in whom femoral hernia is most frequent (after child-bearing period) we have a similar anatomical explanation for this frequency; that is, the female pelvis being much flatter or more horizontal, so that Poupart's ligament is relatively longer, this tends to make the femoral canal wider and more weak than that of the male. In addition to these factors, we must remember the greater relaxed condition of the abdominal walls, in all directions due to child-bearing (Garrigues) after which this variety of hernia chiefly occur.

The peritoneum is more loose below the transversalis muscle and more liable to distension. Some doubt has existed in the minds of writers, as to whether the peritoneum was displaced or distended in hernias, but we know that it readily takes on the position or shape of the viscera, with which it is in contact. Cloquet made several experiments with peritoneum over a ring, loading it with various weights, at first after distending the membrane into a sac; on removal of the weight this sac would disappear, returning to its former position, but with prolonged stretching it was found that the sac did not resume its former position, but permanent dilatation remained, just as it appears with the peritoneum, at one of the hernial openings (MacReady, p. 86).

Pathology of Hernia.

From the anatomical factors stated, we may look at the pathological process of Hernia, as by induction.

First, we assume that there is a small opening, a natural opening, with weak walls or weak re-enforcements, or imperfect development of the columnar fascia of the inguinal ring or falciform process of the femoral. Thus we have an opening of insufficient strength for a

given amount of intra-abdominal pressure. We do not ignore the fact that we have assumed that the walls are weak, and might be asked to explain the "why" of this weakness, to which inquiry we might say, the abdominal walls may be weak from various causes, chief of which is imperfect development. But why imperfect development? We know that such deviations from the natural do not occur without some efficient cause, even if such cause is unknown or obscure.

Let us assume then for hernial pathology that there is a small natural opening with imperfectly developed walls, with this condition and frequent or continued intra-abdominal pressure, even if this pressure is only exerted moderately, as in simple efforts at lifting, straining, pushing, etc. When this exertion is made, the intra-abdominal pressure bears against the peritoneum, crowding it against the abdominal walls and pelvis, and wherever there is a crevice or opening, the peritoneum is pushed against it. The peritoneum being very thin and pliable, it is more readily forced into openings, and with frequent repetition of this intra-abdominal pressure, the peritoneum is pushed forward and downward, so that where we have an opening and the peritoneum pushed against it frequently, we will soon have a dent or depression of peritoneum. This depression may be a mere chink, round or oval, and with the continuance of pressure, the depression deepens until a shallow sac or pouch is formed. As the sac deepens, the opening or mouth of the sac becomes larger, not enough to admit tip of the finger or large enough to permit your fist to pass: with the increase in size of sac, we have a general weakening of the parts surrounding the opening.

This pathological process is based upon the assumption that the person has only employed a moderate amount of intra-abdominal pressure, or in a position which does not call for much hard work, as very heavy lifting, or straining; that is to say, this process, as here outlined, may occur to anyone with but slightly defective abdominal walls and before early adult life. This condition may remain stationary for years or even for life, with

out its becoming known to the subject, except by accident, as calling for a physical examination.

To carry the case further, suppose this patient change his occupation or habits, to those which will call for extra-abdominal efforts, such as in heavy work, heavy lifting, continued straining or such diseases as stricture of the urethra, dysentery, or chronic constipation, then, the already formed sac deepens, the borders of the sac get further apart, so that with continuance of the pressure upon an increased area, we have greater dilatation and stretching of the peritoneum, the protrusion dipping down into the cavity, and gradually increasing in size until it fills or even distends the space.

The protrusion of peritoneum is apt to be pear-shaped, with its mouth communicating with the abdominal cavity, the neck in relation to the rings, sometimes with friction or rubbing against the edges of the ring, the neck of the sac will become thicker, or the tissues get hardened, the folds grow together and fuse with the fibrous structures outside, and so form a dense ring that may continue contracting until the opening is closed, or until a loop of intestine is pushed through the ring, causing irritation and contraction, resulting in strangulated hernia. The intra-abdominal pressure forces everything to bear down. This not only forces the peritoneum further through the opening, but such pressure bears on the mouth of the sac, thus dilating and weakening the natural supports, making the opening more patent, so that when any extra effort is made, as by lifting something heavier than usual, or straining, pulling, pushing, etc., thus causing a protrusion of the viscera into the sac.

From this it will be readily understood that this yielding and stretching of the peritoneum is gradual, and if its structures were not thin and pliable (readily conforming to the visceral outline), it would be more apt to tear, but, as stated, the gradual dilatation of the sac is sufficient explanation why herniae may attain to such size as they frequently do.

If we assume that the canal is large (as from late descent of testes) and strongly re-enforced, the opening being larger

than necessary, say, for the passage of the cord, etc., this condition with extra intra-abdominal pressure, as from laborious work, heavy lifting, etc., the overlying peritoneum, which is gradually forced into the opening, with frequent or constant repetition soon forms a sac, and this constant rubbing on or against the rings, tends to dilate the opening, causing absorption of the surrounding fat and so assists in making the ring more patent, which with extra efforts, as lifting, etc., increases the abnormality.

This picture of hernial pathology is a reasonable explanation why the affection is so common among laboring classes, in whom it is said to occur in 20 to 23 per cent, while in those in easy circumstances it occurs in about 4 per cent, while it is comparatively rare in those of literary pursuits; or, as some writers aver, that hernia is a disease of occupation arising from heavy labor. Of course there are many who go through life with weakened abdominal walls, patent or imperfect rings, etc., who never developed hernia. We think the explanation is simple, i. e., for lack of an exciting cause, or sufficient intra-abdominal pressure to develop the peritoneal sac. We personally know of some who only manifest signs of rupture when they are on vacation, devoting themselves to some fatiguing exercise, long walks, mountain climbing, boat-riding, etc., and on return to their professional pursuits (non-exciting) these hernial symptoms gradually disappear, and such patients may assume there was a mistake in the diagnosis until a subsequent vacation, when the symptoms reappear.

It seems to me there can be no doubt about hernia being of gradual development, although injury or operation may be exciting factors. In conclusion two authors may be quoted, viz.:

Mausel Moullin says, "Hernia may always be traced to the action of abdominal muscles upon the viscera; it is more common among those who follow laborious occupation, with constant heavy strains, than those who lead sedentary lives." (Treat. of Surg., p. 845.)

Tilliman maintains that the sudden development of hernia is always dependent

upon a mistaken observation. The hernial sac is always present, or hernia already formed at the time of injury, it may be so small as escape notice, so that hernia is not exclusively the result of injury, nor does it arise suddenly in consequence of injury, but are in a measure due to the peculiar condition of the body of the person already existing." (Vol. 3, p. 179.)

70 STATE STREET.

**AMPLE HOTEL ACCOMMODATIONS AT
NIAGARA FALLS FOR THE AMERICAN
INSTITUTE NEXT JUNE.**

It is very gratifying to have the assurance that the hotels at Niagara Falls will welcome the coming of the Institute, and will provide ample first-class accommodations at reasonable rates.

On the day that Niagara Falls was chosen by the Institute, at a very largely attended session, as the next place of meeting, the following messages were received at Washington:

International Hotel, Niagara Falls, N. Y.,

June 21, 1900.

To W. H. Hodge, Arlington Hotel, Washington, D. C.:

Will make a special rate \$3.50 per day, American plan, first-class accommodations. If held in June we can take 500.

Can get Opera House for meetings, and committee rooms at International Hotel free of charge, if make this hotel headquarters. International Hotel (Greenwood).

Cataract House, Niagara Falls,

June 21, 1900.

To W. H. Hodge, Arlington Hotel, Washington, D. C.:

Three-fifty per day each, American plan.

Cataract House (R. R. Simpson).

On June 22 the Secretary of the Institute announced the receipt of these messages.

Recently the hotels have given renewed assurances of their desire and ability to care for the Institute, in the following letters:—

International Hotel, Niagara Falls,

Jan. 25, 1901.

Dear Sir:—The American Institute of

MEDICAL ERA

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CH. GATCHELL, M. D.,

Editor Medical Era,

92 State Street, Chicago.

The Medical Era does not send out sample copies promiscuously. If you receive the Era it is because you are on the books as a bona fide subscriber.

Homeopathy, which will meet here in June, can feel assured that every promise made to the gentlemen who met with us some time ago will be faithfully carried out on our part. We will be pleased to have them meet with us and will give them our best accommodations.

Yours very truly,

S. A. Greenwood, Mngr.

To W. H. Hodge, M. D.

Cataract House, Niagara Falls,

Jan. 22, 1901.

My Dear Sir:—I am informed that the American Institute of Homeopathy, which was to hold its convention here in June next, is under the impression that they cannot find the required hotel accommodation. I am sure they will have no trouble in getting all the accommodation they require. Our manager, Mr. Simpson, will be pleased to furnish you accommodation for the rate he quoted you, and will be pleased to enter into arrangements with you for your convention.

Yours very truly,

D. Isaacs.

To Dr. Wm. H. Hodge.

These assurances are ample, and the Institute will have one of the best meeting-places that it has been to in many years.

**MY
DAY**

That suspense is the charm of existence.

That a smile thro' tears is the soul's rainbow of hope.

That many people who get ahead too often get the big-head.

That it is called the "funny-bone" because it borders on the humerus.

That anyone can borrow a book, but it takes a gentleman to return it.

That it is surprising how much trouble some people can stand before it gets to them.

That when men are as good as their obituaries the recording angel can go on a long vacation.

That a blunder is worse than a crime; there is a remedy for crime but no prophylactic against blunders.

That the longer a tramp lives the more he becomes convinced of the unfailing friendship of a ten-cent piece.

That he who gains time gains everything.

That equity follows the law, but often gets left in the race.

That people who talk too much don't realize it till the next day.

That by the time a man is ready to die he has just got into a fit condition to live.

That the only way to get a stubborn person to seek heaven is to try to keep him out.

That the men who took Jonah's money were the same ones who threw him overboard.

That many people spend the day in thinking how wretched they were yesterday and what a good time they will have to-morrow.

That there is a skeleton in the closet of every family but the thing has become so common that there is no use making any bones about it.

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CH. GATCHELL, M. D., EDITOR

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NO. 3

THE DIAGNOSIS OF PRIMARY SYPHILIS.

In some diseased conditions the physician may express doubt about the diagnosis without exciting any undue apprehension or creating any serious risk on the part of the patient. But if syphilis be the disease involved, he should exhaust every resource of medical science in order to aid him in arriving at an accurate diagnosis. It is a matter of vital importance to a man to know whether he is or is not the victim of syphilis. The solution of the question may affect the whole tenor of his after-life.

The diagnosis of the disease is in some instances rendered the more difficult because a patient may have syphilis, and yet there may be no history of a genital lesion. Moreover, every genital lesion, even though it may be followed by a suspicious rash, is not necessarily syphilitic.

These considerations, and the extreme importance of the subject, render the diagnosis of the presence or absence of syphilis one of the most critical problems in medicine.

Heretofore it has been necessary to rely entirely upon clinical symptoms in the diagnosis of the disease. But under modern methods it is now possible to apply a laboratory test which, at the proper period of the disease, possesses great claims to accuracy.

This diagnostic test of the presence of syphilis in the subject is based upon the fact that in syphilis the red blood corpuscle is abnormally sensitive to the in-

fluence of mercury. As a result of the administration of this drug an anemia is induced, which may be detected by examination of the blood.

Mercury in the system of a subject recently infected with syphilis has the effect of markedly reducing the percentage of hemoglobin. There is also a slight reduction in the number of erythrocytes, but, as already stated, the principal change is in the reduction of the percentage of hemoglobin.

In order to determine the effect of mercury in this condition the blood must be examined both before and after its administration. Having made the first examination, a good-sized dose of mercury should be administered. This may be given by inunction, or by subcutaneous injection.

In giving the mercury by inunction the ordinary unguentum hydrargyri (U. S. P.) should be used. This consists of mercury, lard, suet, and oleate of mercury. For use it should be freshly prepared. Do not let the druggist "work over" some old stock that he has on hand.

For purposes of inunction use fifty grains. The best place for application is between the thighs. First scrub the skin of the part well with soap and water, and follow this by washing it with a solution of soda. Apply the ointment and rub it into the skin thoroughly until none remains upon the surface.

For purposes of subcutaneous injection the bichloride is the preferable form. One-eighth of a grain should be dissolved in forty minims of water. A hypodermic

syringe of all glass, or one with rubber mountings, should be used. The injection should be made deeply in the subcutaneous tissues. The place to be selected is the gluteal region, or between the scapulae. First wash the part with some antiseptic solution, and then, out of regard for the patient's sensibilities, spray with chloride of ethyl.

Make the primary examination of the blood one day, and determine the percentage of hemoglobin. After this administer the dose of mercury. The next day examine the blood and again determine the percentage of hemoglobin.

If the patient has recently been infected with syphilis a reduction of from ten to twenty per cent. in the hemoglobin will be found. In no other condition will there be such effect upon the hemoglobin. It occurs only in early syphilis.

This test is not of value in syphilis after the secondary eruption has appeared. It must be made use of in the primary stage. But at that time it is absolutely diagnostic. It should be made use of in every case in which there is any doubt about the diagnosis.

Considering the fact that it is not possible in all cases even for the most experienced syphilologist to say absolutely and finally whether a certain ulcer is or is not specific, the aid to be obtained from this method of diagnosis is of incalculable value. If a non-specific lesion should, through error, be treated as if it were venereal, the patient's entire life would be clouded by the thought that he was a subject of specific infection. Recourse to the method of diagnosis here described will prevent any such grave error.

I have long been convinced that antiseptic gauzes, by all odds, the best possible material at our command for draining the septic uterus, and that it not only keeps open the cervical canal, but maintains a germicide in easy and direct contact with the whole diseased surface and drains effectively in obedience to a well-known law of physics. Of course, if allowed to remain longer than three or four days, it may become saturated with mucus and will not then drain so perfectly.—W. W. Grant.

ORIGINAL ARTICLES

LYCOPODIUM.*

BY A. C. COWPERTHWAIT, M. D.

PROFESSOR OF MATERIA MEDICA IN THE CHICAGO
HOMOEOPATHIC MEDICAL COLLEGE.

When Hahnemann began creating a new materia medica, based upon scientific principles, he found in *Lycopodium* a drug whose action was comparatively unknown. It was considered practically inert, and was chiefly used as an envelope for bolus and pills. It was used as a desiccative for excoriated infants, and internally was prescribed in some urinary troubles. In his everwise sagacity Hahnemann predicted in *Lycopodium* a drug capable of great usefulness when subjected to potentization. His conjectures proved correct, and *Lycopodium* was raised from its former low estate and place among the polychrests. For nearly a century it has sustained its reputation and proved itself to be one of the most valuable drugs of our materia medica. Of late years, however, it has gradually been growing into disuse by that ever-increasing large wing of our school of practice who fail to accord any virtues to a drug other than those which may result from physiological doses.

Lycopodium is a drug which in this regard ranks with Sulphur, Calcarea, Silicia and other drugs whose therapeutic powers are developed by Hahnemann's process of potentization. We may call this developed force dynamics or whatever else we please, the fact, nevertheless, remains that this force, whatever it may be, is not present when the drug is in a crude state, but it is present, and beyond the possibility of argument, after the drug has been subjected to the grinding and tearing asunder process of its particles by the process of trituration and dilution. We cannot afford to lose sight of this great fundamental principle of homeopathy. None may question it in the case, for instance, of Silicia and Calcarea, and if we admit the principle in one drug why should we practically deny it in others? Even the old school admit the truth of

*Homeopathic Medical Society of Chicago, Feb., 1901.

this principle, else why do they triturate quicksilver, a drug which in its crude state is practically inert, with another hard, inert substance, and thus make it the active ingredient of the blue pill? Nor is this the only illustration afforded by the old-school pharmacy of the truth of the therapeutic power of a drug being developed and augmented by the sub-division of its particles by trituration.

Let me say right here that *Lycopodium*, of all other drugs, requires a most careful and thorough trituration. The therapeutic powers of the drug are probably due to the oil contained in the pollen of the plant, which is the recognized officinal portion. These pollen grains possess an extremely hard covering, which can only be reduced and the contained oil given out by thorough trituration. This of course does not affect the developing power of subsequent triturations after the first, otherwise than by giving a proper start for further potentization.

In its crude form *Lycopodium* shows an affinity for the urinary organs, which it affects in a mild degree. The first provings were made with the lower triturations. These showed an increased action on the remaining organs, and a slight action on the organs of nutrition. Provings made with higher potencies showed these effects increased, adding also effects on the alimentary canal. When still higher potencies were employed these effects were all continued and in addition there were obtained effects upon the respiratory system. In other words, *Lycopodium* in its crude state affects only those organs lowest in position and function, and as its power is gradually increased by successive triturations, its sphere of action gradually widens until the respiratory organs, which are the highest in position and function, are included. It has thus been found to affect the three greatest systems — respiratory, alimentary and urinary, in all of which the mucous membranes are chiefly involved.

The pathogenesis of the drug would indicate, as its therapeutic uses have verified, that its chief sphere of usefulness lies in the treatment of chronic diseases. It

presents no picture of acute disease, but always that of a slowly advancing chronic ailment. At the same time it may occasionally prove of use in acute diseases, especially as an intercurrent remedy, something like Sulphur, *Lycopodium* symptoms being present.

It is not my purpose at this time to furnish a complete picture of the action of this remarkable drug. It would require entirely too much of your time. I will only briefly mention a few of its most important features. Many consider the most important therapeutic action of *Lycopodium* to be in respiratory diseases. I am not in accord with this idea. The influence of *Lycopodium* upon the nutrition and its direct effects upon the digestive organs, together with its established therapeutic powers in the same direction, seem to me to be its most essential feature. I feel quite sure that *Lycopodium* is more often prescribed in diseases of digestion than anywhere else, although we should not overlook its value in other diseases.

The well-known conditions of indigestion which characterize *Lycopodium*, especially those resulting from malnutrition, where the patient becomes emaciated in spite of an enormous appetite, and where an excessive accumulation of flatulence, with much rumbling and rolling in the stomach and abdomen is present, is probably the most essential feature of the drug; certainly this is true from a practical if not from a theoretical standpoint. Teste says, and very truly, that "As *Bryonia* seems to correspond more particularly to acute and chronic affections resulting from the excessive use of a strong and exclusively animal diet, so the *Lycopodium* seems to represent in the totality of its symptoms the scenes of functional disorders and of the organic alterations arising from them, which are caused by the abuse of hearty farinaceous or fermentable food. As a general rule no drug is better adapted to indigestions caused by fresh or half-baked bread, or the abominable pies, cakes, butter-crackers, etc., with which so many adults and children are fed."

This readily explains why *Lycopodium*

is so often indicated in the dyspepsia of Americans, where a large majority of cases are due to the excessive use of fermentable foods, composed largely of starch and saccharine ingredients.

According to modern ideas and modern terms *Lycopodium* must be a great intestinal antiseptic, as it will certainly, when indicated, more quickly control intestinal fermentation than any of the well-known drugs so commonly employed for that purpose. But it goes still further, it removes the cause, restores the tone of the organs, and does away with the symptoms of dyspepsia and constipation and their more remote consequences.

No doubt *Lycopodium* is often a valuable remedy in urinary diseases, and the "red sand in the urine" so characteristic of the drug, may also be an indication for its use in dyspepsia. Hughes considers this symptom as due to an "excess of lithic acid gravel," and he looks upon "the copious sediment of this nature as one of the most unerring indications for its use in dyspepsia." I think it equally as unerring in other diseases, though not so often observed.

Lycopodium is frequently of use in the treatment of respiratory diseases — more especially chronic diseases. Chronic pneumonia or bronchitis or tuberculosis often presents *Lycopodium* symptoms, which can only be removed by its use. I have no confidence in the symptom, "fan-like motion of the alae-nasi," unless other well-known indications for *Lycopodium* are also present. This symptom is considered by many as the key-note for *Lycopodium* in pneumonia and other respiratory diseases. The 4 to 8 p. m. aggravation of *Lycopodium* is a most important modality.

In closing this too brief description of this drug I wish to emphasize the fact that it acts better in the higher potencies. I think the chief reason why its use has not been attended with more success in the hands of some is that they have persisted in always using it low. I prefer it low in a case of acute or sub-acute indigestion, but everywhere else I think it acts better in the 30th or higher potencies.

31 WASHINGTON STREET,

THE GENERAL PRACTITIONER'S EXAMINATION OF THE NOSE.*

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The strenuous stringencies of successful family practice offer a partial explanation of the general practitioner's infrequent nose and throat examinations. Another reason is the illusory idea that such examination yields useable facts to specialists only. Nothing is more erroneous, for they oftentimes disclose initial or otherwise significant symptoms that at once unlock distant and obscure constitutional derangements. Furthermore, they frequently furnish ocular proof of local conditions that, unrecognized and uncared for, would seriously endanger, if not defeat, otherwise successful treatment of constitutional disorders.

Many more examinations would be made, I am confident, were it not that the fragile head-mirrors supplied are almost invariably found cracked and useless when most wanted. This annoyance and expense I have obviated by a rubber pad that encircles the mirror, which latter should, by the way, focus at about ten inches.

Place the patient opposite you on the same plane, and slightly behind and on a line with his right ear place your illumination, preferably a thirty-two-candle-power electric light of reduced size, and a frosted globe, or a Welsbach light with a condenser. In an emergency sunlight, lamplight or candle-light will answer, only in the first instance focus the sun's rays but momentarily upon the tissues or employ a plane surface mirror, else a burn will result.

The general conformation of the face should first be carefully scrutinized, as it evidences important changes and enables you many times to detail in advance the patient's symptoms. Arrested development of the frontal or malar eminences, thickened nasal root and undeveloped alae nasi, short upper and everted lower

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lip and sharp retracted chin prove the mouth-breathing habit, of whose importance we will speak later.

Now, before introducing the speculum, tilt back with the thumb the tip of the nose, thus opening the nasal vestibule and exposing the Locus Kiesselbach (that point on the nasal septum upon which the index finger usually impinges when casually introduced). Neglecting this precautionary measure you may overlook a septal erosion or ulceration that your speculum would obscure, to say nothing of the mutually unpleasant hemorrhage that frequently follows. From this spot of Kiesselbach occurs nine-tenths of all nasal hemorrhages. This clinical fact, coupled with the pyramidal shape of the nasal cavity already observed suggests the rational and usually effective method of arresting an epitaxis, which is as follows: — By means of a substantial probe solidly pyramid on the nasal floor continuous strips of antiseptic gauze, the width of the patient's thumb, until the cavity is filled.

Careful introduction of the speculum — the nested Dr. Dunn set is most generally satisfactory — will determine any deviation, thickening or outgrowth in the nature of ridges, spines, shelves, or spurs of the septum from which, if of any size, you may expect any one or all of the following symptoms as a consequence:

1st. Partial or complete nasal occlusion resulting in mouth-breathing and its train of attendant sequences, viz.: restless sleep; nightmare; coated tongue; bad taste in the mouth mornings; chronic cough and recurring attacks of croup, tonsillitis, diphtheria, bronchitis and broncho-pneumonia.

2d. Nasal discharge usually noted posteriorly and caused by the unequal air pressure and the irritation and traumatism of the turbinates from the increased atmospheric velocity through the narrowed passage.

3rd. Ocular derangements or headaches, or both, resulting reflexly from the turbinal irritation.

4th. Eustachian catarrh and impaired hearing. Continuing our examination, we should next note carefully the local, general and relative color of the turbin-

ates, septum and floor. If found pale and unaccompanied by atrophy or nasal discharges, then your patient is an anemic. If to the general paleness of the otherwise normal nose we add the so-called "catarrhal discharges," then your patient has some renal derangement. Again, if the pale turbinates (local paleness, you will observe) are atrophied and there is present dry crusts and some odor, your patient has atrophic rhinitis or so-called "dry catarrh."

If, on the other hand, the tissues are generally reddish or dusky, and the turbinates enlarged but soft, then the resulting discharge, barring a recent "cold," of course, is a consequence of cardiac, enteric, hepatic or splenic irregularities. Were the turbinates alone so colored and dense and resisting to the impress of the probe, which should be large and flexible, the accompanying discharges would justify a diagnosis of hypertrophic rhinitis, more generally known as "moist catarrh."

An enlargement of the middle or lower turbinate that presses upon the septum will occasion any one of the many reflexes, such as aprosexia, cough, headache, neuralgia, etc. Dusky and enlarged turbinates are often mistaken for polypi, less often, however, if one will but remember that turbinal tissue contracts from the application of cocaine solution, while polypoid tissue remains unaffected. Also, polypi are glistening, of slate color, pear shape, easily indented, freely mobile and usually covered with a thin, clear discharge.

A chronic unilateral nasal discharge in children invariably means a foreign body within the nasal cavity often incrustated and scarcely recognizable, while in adults it is usually indicative of disease of some one of the accessory cavities. Notice that normally the floor of the nasal cavity slopes backward and downward. This fact should always remind you to direct the patient to incline his head slightly forward, when applying toxic solutions to the nasal cavity, else poisoning will result from the greedy pharyngeal absorption.

Hibernicism or not, your post-natal examination should begin with the teeth.

You will customarily find the chronic mouth-breather's teeth decayed and overlapping, set in an upper alveolus that terminates in front at an acute instead of an obtuse angle, and the broad, low, hard palate replaced by a very high and narrow one, each condition being the natural result of atmospheric rarefaction in the nasal cavity. Now direct your light upon the base of the uvula and then carefully and quietly press down the tongue with a clean, index finger (the best tongue depressor in the market), or such depressor as this one, which modification reduces to the minimum gagging, the greatest barrier to success. Tongue depression frequently causes the soft palate to rise and cleave to the pharynx, thus effectually shutting off your post-nasal space. If, upon directing the patient to relax his throat, the soft palate does not drop down and forward, request him to breathe through the nose. The post-nasal mirror, preferably a pivoted one such as this, previously warmed, to prevent the patient's moist breath from filming its refractive surface, should be introduced into the pharyngeal space back of the soft palate, being careful not to touch the tongue or pharynx. Now incline the mirror surface until an image of the post-nasal tissues falls upon the surface. All three turbinates are visible, the middle being the largest posteriorly, however. As before, look for septal or turbinal hypertrophies. Your mirror being in place, examine the naso-pharyngeal vault, which should be shaped like a dome and smooth of surface. Here the ever-frequent adenoid growth is about the only pathological condition of interest to the general practitioner. You will easily recognize it from the following description by Morse: "A nodular, irregular mass of cauliflower shape, of pink color, found in the vault and on the posterior wall, where it may hang as stalactites behind the choanae, fill up Rosenmuller's fossae or obstruct the orifice of the Eustachian tubes."

Failing in mirror examination, as one often will in children, either from tonsillar hypertrophy or otherwise contracted throats, proceed to digital exploration after the following method: Pass your

left arm about the child's neck and press in the cheek over the teeth with the index finger of the same hand, so that your examining digit cannot be bitten. Then along the side of the mouth, past the tonsil and to the posterior pharyngeal wall carefully pass the clean index finger of the right hand. Now incline the examining finger upward until it reaches the lower part of the septum, which traced up leads you to the growth, whose location, extent and peculiar spongy "feel" a little practice will enable you to instantly recognize.

The awakening of progressive physicians to a realization of the profoundly pernicious effect of these growths upon the health, growth and diseases of children — stripped of such enthusiasm and optimism as a specialist may confess — promises a new and salutary era for the puny little people.

Neither knowledge nor skill come for the asking, nor are the difficulties in acquiring proficiency in this branch such but that some patience and more practice will surmount. A general practitioner who could put to shame many a self-styled nose and throat specialist (I refer to the breed that jumps out of college into a specialty without the very necessary training in general practice), tells me he acquired his proficiency without any great difficulty from his routine practice of examining the nose and throat of every patient that came to his office, in the main, a most commendable practice, I should say. Here, as elsewhere, the immense importance of at least general clinical knowledge of normal conditions cannot be over-estimated, and the man who realizes and accepts this truth not only compounds his professional worth and success each year of his life, but possesses in his perpetual possibilities for original work a perennial panacea that prevents professional presenility.

103 STATE STREET.

Discussion by Dr. Ch. Gatchell.

The opening words of Dr. Smith's very suggestive paper give the key to the subject. He says that the condition of the tissues of the nose and throat often disclose symptoms that are significant of

distant and obscure constitutional derangements. This must be the chief value of nose and throat examination to the general practitioner.

Dr. Smith notes some of these conditions. He tells us that when the color of the turbinates, septum and floor is found to be pale, without atrophy or nasal discharge, it is an indication that the patient is anemic. And so he tells us of the local nose-and-throat conditions which point to renal derangement, cardiac, enteric or splenic irregularities. We all know how asthma, of the nervous variety, can be caused by irritation having its seat in the nose.

There is another diseased condition which is attended by a characteristic appearance of the membranes and tissues of the nose and throat. I refer to phthisis. In cases of this affection it is the throat more especially that reveals the significant signs. The mucous membrane will be found to be pale and anemic. It is thin, and has a "drawn" appearance, clinging tightly to the sub-mucous structures. It appears atrophied, and yet it is not the kind of atrophy which belongs to an atrophic pharyngitis. Moreover, what is especially noticeable is the absence of glandular enlargements. The tonsils, also, are small in size. Enlarged tonsils in the throat of a phthisical patient is a condition that is seldom or never seen. The membranes of the nose have a similar appearance to that described as belonging to the throat. They are pale, anemic and dry. The dryness of the mucous membranes of the nose and throat is a peculiarity in phthisical subjects that is worthy of note. These patients are not subject to profuse nasal catarrh. There is rather an absence of free secretion. The notion that certain quacks endeavor to instill into the public mind, that "That catarrh will lead to consumption," is founded upon error. The patient with profuse nasal and pharyngeal catarrh is not the one who is most liable to be a candidate for phthisis. It is rather the one with comparatively dry mucous membranes who is so predisposed.

It is in this way that, according to the suggestions contained in Dr. Smith's paper, the general practitioner may be benefited by an intelligent knowledge of nose

and throat examination. The nose and throat conditions that are purely local — and there are such — belong to the specialists. Those which — like the reddish, dusky color of the soft and enlarged turbinates and surrounding structures point to cardiac disease, and the pale and dry membranes of the pretubercular stage of phthisis — are indicative of constitutional maladies, are the ones in which the general practitioner is most interested. I think that Dr. Smith's paper serves a very useful purpose in calling attention to these conditions, and as a result of this discussion I would suggest that our nose and throat specialists can perform a very useful work by making us acquainted with all the conditions of these parts which have clinical significance in connection with disease in other and remote parts of the body.

MITRAL INCOMPETENCE AND MITRAL SYSTOLIC MURMUR.

A Clinical Lecture Delivered at Cook County Hospital, Chicago, Feb. 18, 1901.

BY CH. GATCHELL, M. D.

PROFESSOR OF DISEASES OF THE CHEST AND OF PHYSICAL DIAGNOSIS IN THE CHICAGO HOMOEOPATHIC MEDICAL COLLEGE; ATTENDING PHYSICIAN TO COOK COUNTY HOSPITAL.

Gentlemen: — The patient that I now show you is suffering from the most common form of heart lesion that there is. In the early stage of diseases of the heart mitral incompetence is the form that it assumes in fully one-half of all cases. Hence, if you learn to distinguish this condition you will have made a fair beginning in the art of cardiac diagnosis.

As I place the bell of the stethoscope over the region of the apex on this man's chest, in addition to the ordinary heart-sounds I hear an adventitious sound, a soft blowing, which you have learned to call a "murmur."

This murmur, and the condition that produces it, are known by several different names, all of which, however, refer to the one condition. It is called a mitral indirect murmur, a murmur of mitral incompetence, of mitral insufficiency, and of mitral regurgitation. All these

terms are sufficiently descriptive, and they may be used indifferently. By habit I have come to make most frequent use of the term "mitral incompetence."

There are two other facts connected with the presence of this adventitious sound which enter into the diagnosis. One is that the sound is most intense at the heart's apex, and the other is that the murmur is synchronous with the heart's systole. It is this that enables us to make the diagnosis of mitral incompetence.

But this simple statement by no means covers the whole subject of the diagnosis of mitral systolic lesions, and I now purpose illustrating on this patient, for your instruction, all methods to be employed in such cases.

Not only in this case, but in all diseases of the heart, one of the first and most important things to be done is to locate the apex beat. It may be taken as a general rule — to which, however, there are exceptions — that in all cardiac affections involving lesion of the orifices or of the valves, the changes are not of a serious nature so long as there is no dislocation of the apex.

Normally the location of the apex beat may be determined by placing the end of one finger in the fifth inter-space of the left side about one-half inch to the right of the mammillary line. At this point the finger should feel a "lifting" sensation with each systole of the heart. The stroke that is felt should be sharp and well defined, what is called "punctuate."

In hypertrophy or dilatation of the heart the apex is always displaced. In some instances it is carried very far from its normal location, in extreme cases as far as the sixth, seventh, or even the eighth interspace, in the anterior axillary line. In this patient I am able by palpation with the finger to detect the apex beat in the sixth interspace, and an inch to the left of the mammillary line, indicating a condition of great dilatation of the left ventricle.

When the chest walls are very thick, more especially if they are heavily clothed with subcutaneous fat, it may be impossible to detect the apex beat. Again, if the heart be dilated, and the walls of the

left ventricle are thin and weak, the stroke of the apex against the chest wall may convey no impression to the applied finger. In such case, have the patient lean the body forward. This brings the heart against the chest wall, and sometimes makes the impulse appreciable. This failing, it then becomes necessary to make use of percussion, in place of palpation.

In order to accomplish this, percuss over the region of the heart until you have determined the lowermost angle of resistance. But for the presence of the left lobe of the liver adjacent to the heart, this would be a very simple matter. But, notwithstanding this fact, with care it is possible to differentiate between the two. In no case does the liver extend as far to the left as the heart's apex.

Having located the apex, and, by auscultation, detected the presence of a murmur having its maximum intensity at that point, the next thing to be done is to establish the rhythm of the murmur, to determine whether it is systolic, presystolic or diastolic. The most accurate method of doing this is to place the point of the finger where the apex beat is felt, as I now do with this patient. Now I place the bell of the stethoscope near my finger, where I distinctly hear the murmur. By this method I find that the systole of the heart and the sound of the murmur occur at precisely the same instant of time, which establishes it as being a systolic murmur, or one of mitral incompetence. If the murmur, instead of being synchronous with the heart's systole, occurred during the diastolic period, it would be one of aortic incompetence. If it occurred just before the systole, terminating abruptly with the occurrence of that act, it would be a murmur of mitral stenosis.

But in this case we have determined that the murmur is mitral systolic. It is not always possible to determine the rhythm of the murmur in the manner in which I have done in this case. Sometimes the "lift" of the apex beat cannot be felt by the finger. In such event it becomes necessary to time the murmur by the pulsation of an artery; not the radial artery, for its pulsation may be de-

laid. Place the finger over the carotid, for the pulsation of that vessel is practically synchronous with the heart's systole.

But now there is another thing to be taken into consideration. All murmurs heard in the cardiac region are not produced in the heart. There are murmurs which are produced outside the heart — extra-cardiac murmurs.

In the present case, and, in fact, in all cases, it is essential to determine whether the sound which is heard is intra-cardiac or extra-cardiac. If extra-cardiac, the murmur may be produced in the pericardium, in the pleura, or in the lung.

Let us first consider the peri-cardial murmur.

This sound has certain qualities which serve to distinguish it. In character it is not a soft blowing, like the mitral indirect murmur, but it is a "rubbing," or "shuffling" sound, or like the creaking of new leather. Moreover, the location of this murmur is not at the apex, but it is rather over the region of the cardiac triangle. You will also observe that the sound has a "to-and-fro" character, instead of attending only the systolic action of the heart. Also, the sound changes with change in the bodily posture of the patient, and it becomes more pronounced if pressure with the stethoscope or the hand be made over the region of the heart.

When the murmur is due to roughening of the pleural surfaces, from inflammation of that membrane, the diagnosis is not difficult. The pleura gives forth a distinct and unmistakable friction sound. Let the patient hold his breath and the murmur will cease. If the murmur be pleuro-pericardial, that is, produced by the action of the heart upon an adjacent portion of the inflamed pleura, it may be distinguished by the following signs, namely — the location of the same will be near the border of the left ventricle; the intensity of the murmur is increased on deep inspiration, and, on the other hand, it is less pronounced on expiration; whereas, in the case of pericardial friction, the sound is more pronounced on expiration.

There is still another sound that may

be produced in the region of the apex of the heart, which must be taken into consideration. It is a lung sound, and is produced by the stroke of the heart, with each systole, upon the neighboring border of lung substance. The effect of this stroke is to drive a small "puff" of air out of alveoli of the lung at the point of impact, and so produce a sound much resembling an intracardiac murmur. It will be noted, however, that this sound is affected in its intensity by the respiratory act. It is more pronounced on inspiration, less pronounced on expiration, or it may even disappear at the end of expiration.

Now, in any case, as in this case, having ruled out the possibility of the murmur being extra-cardiac, we come to consider its true nature.

The murmur that I hear over the region of the apex in this man's chest has a soft, blowing sound. This is the characteristic systolic mitral murmur. There are many cases in which there is a departure from this type, but, as a rule, the murmur has the quality that I describe — it is a soft blowing sound, which may be imitated by pronouncing the word "who" with a prolonged sound, shading off at the end. As you will learn in connection with another case, the mitral indirect murmur differs in this respect from the mitral direct murmur. But there is no rule; a mitral systolic murmur in some cases will be harsh, or even whistling.

The direction of propagation of the murmur is another element in its diagnosis. As I move the stethoscope away from the apex I find that I can follow the sound as far as the left axilla. Again, on placing the stethoscope over the back at the level of the eighth cervical vertebra, which is on a line with the lower angle of the scapula, the murmur is also audible in that region. These signs — that is, propagation to the left axilla and audibility in the back — are further elements in the diagnosis of mitral indirect murmurs.

But we must study exceptions, as well as rules. All mitral systolic murmurs are not propagated to the left axilla. In some instances the murmur may be con-

ducted to the second and third intercostal cartilages of the left side, including the second interspace. Such conduction is unusual, but it is dependent upon an unusual condition. It is due to a thickening of the interventricular septum, as a result of fibroid changes. The special seat of the thickened tissue is at the conus of the left ventricle just below the aortic valves.

Again, a mitral systolic murmur in rare cases may be conducted to the tricuspid area, at the lower part of the sternum. When this occurs it is due to fibroid or calcareous changes in the anterior segment of the mitral valve and the corresponding columnae carnaeae. When propagated to this region the murmur is heard in the same location in which we seek for a tricuspid murmur, but it may be differentiated from the latter by the fact that there is absence of the venous and hepatic pulsation which attends tricuspid regurgitation.

When a condition of mitral regurgitation once becomes established a certain train of heart changes inevitably follows. The first effect is hypertrophy and dilatation of the left auricle, together with like changes in the left ventricle.

The left ventricle is imperfectly empty, and there is increased resistance at the time of each systole. The effect of this is to cause hypertrophy and dilatation of the left ventricle, with all its accompanying signs, which are dislocation of the apex beat and extension of percussion dulness to the left, together with more forcible impulse of the heart against the chest wall with each systole.

The effect upon the left auricle, as I have said, is also to produce a condition of hypertrophy and dilatation. Owing to the imperfection in the closure of the mitral curtains, with each systole of the heart a quantity of blood is forced from the ventricle, which has just received it, back into the auricle. This produces over-distension of the auricle, it throws a greater burden of resistance upon its walls, and this leads to the condition of hypertrophy and dilatation, according to well-known laws.

Another physical sign attending a condition of mitral regurgitation is accen-

tuation of the pulmonic second sound. As the right ventricle forces blood over the pulmonary arc, from the right side of the heart to the left, the blood so propelled meets with a reflux current in the left auricle. This resistance produces a condition of exaggerated tension in the pulmonary artery. As always occurs when this condition obtains, at the time of each diastole of the heart the pulmonary valves are closed with increased force, and this accentuates the sound.

The obstruction to the free flow of the blood in the left heart is reflected over to the right side through the pulmonary arc, and the next change in the vicious circle takes place. The right ventricle undergoes hypertrophy and dilatation. Next follows relative dilatation of the tricuspid orifice, with regurgitation. Now new signs are added to those previously existing — namely, venous and hepatic pulsation.

So long as compensation in the ventricles is maintained the patient's condition is one of comparative comfort. So long as he leads a quiet life, he suffers little inconvenience. In this condition he may go on for years. But sooner or later compensation fails. The heart muscle suffers degenerative changes and the weakened walls give way. Now dilatation exceeds hypertrophy.

One of the early signs of lessened power in the right ventricle is loss of accentuation of the pulmonic second sound. All the cavities now become dilated. The heart takes on the form of a large, flabby bag. There is weak impulse, extension of cardiac dulness to the right of the sternum, and also far to the left of the nipple line. The radial pulse is small and of low tension. The superficial veins are turgid. There are blue lips, and cyanosis of the general surface. There is urgent cardiac dyspnea. Edema, beginning at the ankles, and finally involving the entire body, gradually develops. Owing to the dyspnea the patient cannot lie down, but remains seated in a chair. As the end draws near death may be due to asphyxia from edema of the lungs, or the immediate cause may be stoppage of the heart's action from failure of its dilated

and weakened walls, coming to rest in diastole, with engorged right heart.

The pathological conditions which are present in incompetence of the mitral valves, are many and various. The most common is rheumatic endocarditis. In rheumatism, when the endocardium becomes affected, it is in the neighborhood of the mitral valves that the inflammation is most severe. In a series of three hundred cases of endocarditis reported by one authority, the mitral valves were affected in two hundred and fifty-five.

The pathological changes are very pronounced. The valve is infiltrated with cellular elements. The cells of the endocardium become clouded and swollen. The valves, the chordae tendineae and the columnae carnaeae become rigid. There is in all these parts connective tissue hyperplasia, with subsequent contraction and thickening of the valves. The cicatricial change may convert the crippled valve into a hard, cartilaginous-like structure, or it may later undergo calcareous degeneration, and the mitral orifice may become hard and brittle.

But rheumatic endocarditis is not the only pathological change which may lead to mitral incompetence. Other conditions which may cause it are ulcerative endocarditis, myocarditis, over-strain, anemia, and neuro-cardiac disease.

In this connection I wish to call your attention to a form of mitral systolic murmur of another character. In many acute fevers, such as scarlatina, diphtheria, typhus and typhoid there may be heard over the region of the heart's apex a murmur, systolic in rhythm. In severe cases of typhoid such murmurs may be heard even when there has been no murmur before the attack. It usually makes its appearance about the end of the second week. The sound is sometimes soft, sometimes rough and harsh. It is a peculiarity of these murmurs that they are very changeable; they change from day to day; they change with the position of the patient; they change in their line of propagation, they sometimes appear and disappear.

After recovery from the effects of the disease in most cases the murmur permanently disappears. All this would in-

dicate that the murmur is not due to any changes in the endocardium, but to alterations in the muscles of the heart. The changes are inflammatory in origin, and are degenerative in nature. In such cases if the typhoid results fatally, on post mortem the muscle fibres of the heart will be found to be swollen, their striation is lost, and they are seen to have undergone fatty and granular degeneration; the muscle nuclei are enlarged and multiplied, and the intermuscular spaces contain leucocytes and erythrocytes.

In the course of the attack of typhoid these degenerative changes have the effect of preventing the perfect apposition of the mitral valves at the time of the heart's systole, and the result is a condition of incompetence, with regurgitation.

In the condition of which I am now speaking, there are other concomitant symptoms, in addition to the murmur. These signs are, irregularity in the rhythm of the heart, irregularity of volume of the pulse, with marked diastolic.

In these cases, also, the rapidity of the pulse is out of proportion to the temperature, as, for instance, a temperature of, maybe, 102° F., with a pulse of 150 or over.

Cases of typhoid in which such a condition of the heart develops always call for a guarded prognosis, and it may be laid down as a rule that tachycardia in a typhoid convalescent is always an unfavorable sign. Any sudden shock or over-exertion may cause stoppage of the heart's action.

In other infectious diseases there may be an evanescent murmur in the course of the attack. Even the murmur which appears in the course of an attack of acute rheumatism is not always persistent. With recovery, some such murmurs disappear. In such cases the pathological change is not in the structure of the valves, but it is due to round-cell infiltration of the myocardium, especially immediately underneath the endocardium. With recovery from the attack of acute rheumatism the myocarditis subsides, the heart muscle is restored, and the previously-existing murmur disappears.

The murmurs which persist after an

attack of acute rheumatism are those which are due to organic changes in the valves, in the chordae tendineae or the muscoli papillares. Then there is subsequent hypertrophy and dilation of the heart, with all the attendant changes.

There is a common notion that when one has valvular disease of the heart — what is commonly called “heart disease” — such person’s life is destined to be but brief. In some diseased conditions of the heart this is true, but it is not always so in cases of mitral regurgitant lesion. This form of heart disease bears the most favorable prognosis of all allied conditions. A subject of mitral regurgitant lesion, in some instances, may survive for a great many years. Cases have been known in which a heart in this condition has served the purpose of propelling the blood stream for the long period of sixty-six years. This, of course, is very extreme, and is exceptional. But it will serve to impress upon your minds the fact that I have already stated, that this form of cardiac disease bears the best prognosis of any. Moreover, a mitral regurgitant lesion is a systolic lesion, and systolic lesions are never so grave as diastolic lesions. For instance, in mitral stenosis, which is a systolic lesion, the prognosis is always unfavorable.

In the condition that we are now considering — mitral incompetence — the patient suffers little discomfort so long as adequate compensation exists. So long as the right ventricle maintains a condition of hypertrophy, with power to force the venous current over the pulmonary arc and successfully oppose the reflux in the left auricle, just so long is the patient free from distressing symptoms. But when, from the degenerative changes belonging to age or to disease, the myocardium begins to fail, and dilatation succeeds to hypertrophy, then the symptoms are initiated which mark the beginning of the end. Now there is passive congestion of the lungs, with dyspnea; there is relative tricuspid incompetence, with venous and hepatic pulsation, edema, dropsy, and finally anasura, with death from heart-failure, or edema of the lungs.

It has been said that in disease of the heart the prognosis should always be

made according to the best aspect of the case, the treatment conducted according to the worst aspect of the case. In other words, cheer your patient while at the same time you are exerting yourself to give him the benefit of all that medical science has to offer. As the lungs are the organs which are the sympathetic seat of the emotion of hope, so is the heart the seat of the emotion of fear. A patient with disease of the heart often holds his life in his own hands. By apprehension and fear he may hasten the fatal end. It is for you to dispel all such cause for alarm, and reassure your patient. This is half the battle.

While compensation is still maintained, there is little to be done in the way of active treatment. The chief thing at this time is that the patient shall observe regular habits of life. He must especially avoid all over-exertion or unusual physical effort. In a word, he must avoid everything that would throw increased strain upon the heart. Of all people in the world the patient with heart-disease must “take life easily,” as Mr. Nye put it. He must avoid both physical exertion and mental or emotional excitement. He must, so far as possible, live a vegetative life. In this way the evil day of failing compensation may be long deferred. The diet, and the eating habits, should be carefully regulated. The general nutrition of the body — which, of course, will include that of the heart — must be kept up to the highest standard. During this period there is little call for medicinal treatment, unless it be for constitutional conditions. The heart itself needs no direct medication.

But, when the inevitable happens, when compensation fails, as sooner or later it will, more active measures must be made use of. Now the myocardium suffers from degenerative changes, it stretches, the heart dilates, and its weakened walls are no longer able to propel with force the lagging blood stream.

It is at this period that the case usually comes into the physician’s hands. Growing discomfort drives the patient to the doctor. The course of treatment to be pursued may be summed up in three words — rest, diet, medicines.

When compensation has failed and the heart is dilated, it must have rest. Under rest treatment many cases will make great improvement. If the condition is an extreme one, the rest must be absolute, which means rest in bed. In less advanced cases the rest will consist of regulation of the habits of life in order to relieve the heart of undue strain. Such a patient will avoid lifting, stooping or straining; he will never permit himself to become fatigued, never climb stairs, or indulge in active exercise of any kind.

But the more advanced case, the one in which rest in bed is demanded, must not be permitted to suffer from the confinement and inactivity. In such event the tissues of the body — including the heart — would degenerate for want of proper stimulus. Give the bedridden patient the benefit of passive exercise. This should be in the form of skillfully administered massage, and also resisted movements.

The patient should be given a concentrated and nutritious diet. In many cases an exclusive milk diet has been of greatest benefit in this condition. The kidneys take on renewed action, dropsy subsides, the heart shows signs of reduced area, and the pulse becomes stronger. Other articles of diet will be found in scraped meat, soup, and eggs. Articles of food that would cause distension of the stomach with gases must be carefully avoided. The meals should be light in quantity, especially the last meal of the day, and it should be taken several hours before bedtime.

Bathing will have a beneficial effect. The temperature of the water should be warm, or tepid. The carbonated baths, such as are used at Bad Nauheim, have produced favorable results in many cases. The bath treatment is combined with resisted exercise. Under this method a dilated heart may be markedly reduced in size and the patient's general condition be correspondingly improved.

The drugs which may be used in this condition are many, but there is one which stands out above all others as the most efficient medicinal agent in dilated heart with mitral regurgitant lesion. This is, Digitalis. Many substitutes for this

agent have been tried, such as Strophanthus, Convallaria, Sparteina, and others — but, while these substitutes may at times be used in order to provide relief from the cumulative effect of digitalis, yet in the end we must turn to the fox-glove for our most efficient aid.

In the giving of digitalis, its pathogenetic effect upon the heart must be well understood and kept in mind. Of itself it gives to the heart no force or "tone." It lends it not an ounce of energy. Its direct effect is to slow the action of the heart by lengthening the diastolic period. This is done by stimulation of the vagus, the inhibitory nerve of the heart, which it affects both in its center and in its periphery. The effect of slowing the action of the heart by lengthening the diastolic period is to give the heart a chance to make use of its own blood supply in improving its nutrition. This is what digitalis does; nothing more, nothing less.

But there are certain precautions to be observed in the use of this agent. Its effect is cumulative, hence it must not be given for too long a period without interruption. It may be given for one or two weeks, and then it should be suspended for three or four weeks. At the end of that time it may be resumed. The dosage of digitalis should be carefully regulated. The tendency is to give too large a dose. Five drops of the tincture three times a day is sufficient. In some cases this dose can be reduced. Remember that its effect is cumulative. While taking digitalis the patient should remain at rest in bed.

Of substitutes for digitalis, strophanthus is the one which most nearly resembles it in action. It has no cumulative effect, and it does not irritate the stomach, as digitalis may. But it cannot entirely replace the fox-glove. The dosage is the same as that of digitalis.

Crategus has been put forward as a useful agent in advanced cases, with edema or anasarca. But its action seems to be quite variable.

In children a symmetrical pain about the shoulders should lead to a careful examination of the neck, for it is a frequent sign of beginning caries of the cervical vertebrae.

SELECTED

LARGE GALL STONES WITH CARCINOMA OF LIVER.

C. R. Crosby, M. D., Cannonsburg, Mich.

The following remarkable case, which will no doubt be of interest to the medical profession, would seem to negative the theory that it is possible to employ drugs of sufficient activity and strength to dissolve gall stones in the human system. The accompanying engraving shows the stones their actual size just as they were removed at the autopsy. The history of the case is as follows:

Caro. — Mrs. H. R. C., aged 59, mother of four children, had suffered for years with stomach troubles somewhat ill defined, sometimes being of a dyspeptic character, distress after eating, and sometimes with regurgitation of food. These variable conditions made correct diagnosis somewhat difficult. In September, 1899, she was taken severely ill with congestion of liver, from which she slowly rallied under the care of Dr. Mathews. In February, 1900, she came to my care,



The small stone weighed 11 grains, the large one 294 grains.

and seemed benefited by treatment for chronic gastritis. The presence of gall stones was suspected as well as carcinoma of liver. During the summer she slightly improved in health, except the recurrence of spells of vomiting at intervals of from five to ten days. In the latter part of August the vomiting increased until it was evident that everything taken into the stomach was being rejected, and

rectal feeding was resorted to. Dr. M. was called in consultation, and remained to the autopsy. The stone was found in the small intestines some distance below the duodenum, which was found occluded by cicatrization from repeated ulceration. The liver had lost its constituency, and broke with its own weight when handled. It was black in places and in others dark. The stone presents the same mottled appearance.

Aside from the conditions of the liver and the parts in proximity, the entire system was in a fairly healthy condition. It would seem that the only recourse in the case of gall stones is to remove them as soon as possible and use remedies to prevent their formation. — Medical Counselor.

Gonorrhoea and Marriage.

The Medical Review of Reviews thus summarizes Jullien's monograph on this subject:

The first chapter discusses gonorrhea in general, the methods now in use in investigating the urethra, and the role of the gonococcus in producing gynecological affections. These topics are, or should be, sufficiently well understood by the average reader.

The second chapter treats of the possible coincidence of acute gonorrhea and the honeymoon. The author discusses the course to pursue under two conditions according as the disease is contracted after the date of the wedding has been fixed, or after the marriage has actually been celebrated. He also reviews separately the course to be pursued by a marrying man who is infected before any actual steps have been taken toward marriage; but this problem is a familiar and relatively simple one, for the patient has merely to take steps to recover with the understanding that he must not marry until cured.

It is a more complicated state of affairs when the wedding day has already been fixed. A would-be bridegroom finds himself infected after his betrothal ceremonies. He will, of course, be compelled to renounce those numerous social functions which involve dancing, wine-drink-

ing, etc. Perhaps his wedding day is not more than a week or two removed. It is true that the modesty and shyness of the newly-made wife will co-operate with the groom's own necessity for continence. Many young men, however, hold gonorrhea so lightly that they are not held back by any fear of imperiling the health of the wife.

The physician's first duty is, of course, to urge a postponement of the wedding. If the man will not agree thereto, the practitioner should not abandon the case, but do all in his power to protect the woman from infection. The author does not hesitate in these cases to attempt to abort the discharge by the use of strong injections (1 : 20) of nitrate of silver. He assures the reader that he has never seen a case aggravated by this treatment, and has had many gratifying results. But if the time for jugulation has passed, Jullien makes use of the permanganate of potash irrigation. He also uses, as synergists, astringent injections, and further advises the administration of balsamics. Chopart's draught (active ingredient *copaiba*) has borne a good reputation in this connection for over a century.

But if the wedding day finds the bridegroom still unclean, he must be taught all the bad consequences which might accrue from intercourse, not only to the wife but to himself. The prospect of having a swelled testicle develop will often cool the ardor of some irresponsible fellow. On the other hand the natural coldness of well-bred girls gives the infected husband a chance to abstain for a time. The use of condoms is not mentioned in this connection, probably because the occurrence of sexual intercourse during acute gonorrhea is unthinkable under any circumstances.

Jullien now discusses the development of acute gonorrhea in a man after marriage. The problem is manifold, since one or both of the spouses may be unchaste. When a married man is infected we must manage, if possible, to secure truthful answers from him. If he is disposed to falsehood, to confront him with the gonococcus will cause him to retract his lies. Many of the laity associate the idea of infection with the completion

of lust; such men think they speak the truth when they say they have not been exposed, although they may have had their genitals in temporary contact with those of an infected woman.

If we are satisfied that the husband has actually been infected by his wife, what is to be done, what said? Jullien thinks it the duty of the physician to equivocate, and to fall in with the patient's own point of view. If he thinks he has overstrained himself in intercourse with his wife, he should not be undeceived. But the patient may be cunning enough to set a trap for the physician. A stranger, for example, may present himself and ask a question which requires a categorical answer. Under circumstances of this sort we must be careful about committing ourselves. But the wife in this case may not be morally guilty of infecting her husband. She may be a widow or divorcee contaminated by her former spouse, and suffering from the lighting up of a latent gonorrhea. But it does no harm as a rule (provided the word gonorrhea is not mentioned) to ask permission to examine the wife. The interview with the latter calls for the exercise of the greatest tact. Jullien advises the physician, if sure of his ground, to tell the woman plainly that her examination will be absolutely necessary to clear up an obscure state of affairs. Not infrequently the medical man has to listen to a confession and self-accusation on the part of the wife.

It must not be forgotten that the husband's gonorrhea may be simply the reawakening of a latent case contracted at a time so long past that the fact is ignored. But this recrudescence may have come about after an illegitimate coitus, so that the husband, while morally guilty, is really innocent of bringing fresh disease into his home.

To distinguish these reawakenings from actual infection, we must bear in mind that the former have no real period of incubation, but appear a few hours after coitus. The determining causes, aside from coitus itself, are usually the drinking of champagne and beer, and excessive intercourse.

It frequently occurs that a husband de-

prived by his wife's absence from home or pregnancy of his habitual sexual indulgence makes his first false step and contracts his first clap. In exceptional cases the man has time to recover before his wife returns home or recovers her health, but, as a rule, the husband has no such good fortune, and is hourly exposed to detection. Each case of this sort is a law to itself. Much depends on the disposition and knowledge of the wife. The husband is liable to betrayal through a score of circumstances, every one of which must be anticipated. Often he falls back on the time-honored excuses of overwork, palpitation of the heart, etc., to excuse his refusal to seek his usual coitus. The worst of all procedures, however, is confession. The physician may sometimes come to the rescue by telling the wife that her husband is suffering from gravel or some other ailment. Another way out of the difficulty, which is done often enough, is for the recreant husband to accuse his wife, not, indeed, of unchastity, but of having infected him through her leucorrhea, menstrual flow, or the like.

The problem changes when the disease is chronic instead of recent gonorrhea. There is abundant evidence that these chronic discharges in the male can infect the female with the production of the serious near and remote consequences also caused by the acute discharge. The course to be pursued after the betrothal and wedding, respectively, is the same as has been described under acute gonorrhea.

Management of Normal Labor.

1. The importance of making a diagnosis and a complete physical examination about one month before the onset of labor. This not only will give a great deal of information which may be utilized during the labor, but it affords ample time in which premature labor can be induced if there is any abnormality.

2. Infrequent examinations during labor; if the delivery of women could be regarded as a surgical operation, requiring as full and complete antiseptic details as other surgical procedures, we

could confidently expect nonfebrile convalescence. The fact that sterilization of the external genitals, the thighs, and the lower portion of the abdomen is sufficient, deserves mention. An antepartum douche is not only unnecessary, but it is actually harmful, as has been shown by Leopold and others. The use of gloves has not been satisfactory.

3. The use of anesthetics should be more general in private practice. Ether possesses many advantages over chloroform, and should be used, as a rule, when the pains are of moderate intensity. We have not had enough experience with the new method of spinal anesthesia to justify its use in more than an experimental way; and if added experience shows freedom from complications, we shall have at our command a method that is nearly ideal.

4. In the hands of the general practitioner, a low forceps operation should be performed with greater frequency. It is easy of execution, is devoid of danger, saves unnecessary suffering on the part of the patient, and often actually enables us to preserve the perineal floor intact. On the other hand, however, median operations, within the cervical canal, and high operations should be done only for some special indication.

5. Nonfebrile convalescence and freedom from local discomfort in cases in which the parturient canal is intact; it is of the greatest importance in the management of normal cases to acquire skill in so guiding the passage of the head and shoulders over the perineum that the risk of even a slight laceration may be reduced to a minimum. In addition to the danger of a mild puerperal fever, lacerations have a tendency to interfere with the involution of the vagina and uterus, and they predispose to many conditions requiring treatment by a gynecologist. Too many obstetricians are careless in this respect, relying upon the usually good results of an immediate repair.

Always empty the bladder before tapping the abdomen. Neglect of this precaution, especially in old men who may have retention due to prostatic trouble, may lead to puncture of the bladder.

SURGICAL ERA

CHAR. ADAMS, M. D., EDITOR

CHICAGO, MARCH, 1901

A NEW METHOD OF COLOSTOMY.

Since the practice of colostomy in the groin rather than in the lumbar region has been in vogue, the technique of the operation has undergone numerous changes. These modifications have been due to studious efforts on the part of various surgeons to overcome defects in the operation as practiced during the first years of its adoption.

The operation may be imperatively called for as a palliative measure in cases of sudden obstruction in or below the "omega loop" of the colon, but generally is done deliberately for the relief of certain chronic conditions of the rectum or to anticipate obstruction of the lower bowel by gradually increasing new growths. It may also be made as a temporary measure to divert the fecal current preliminary to the extirpation of such growths. The operation of Maydl has we believe been most in favor and is not difficult of performance for any one with experience in intestinal surgery, but a simpler method of operating for cases not requiring immediate opening of the intestine has been recently published by a Parisian surgeon. We give herewith a translation of the article describing the new procedure from the *Revue de Chirurgie*, Paris, November, 1900.

The Technique of Colostomy in the Treatment of certain Inoperable Tumors of the Rectum, by Henri Hartmann of Paris.

From the time that the work of A. Verneuil and P. Reclus (1885) brought about the employment of iliac, instead of lumbar, colostomy in the palliative treatment of inoperable lesions of the rectum (cancers invading neighboring tissues, extensive strictures with multiple fistules, etc.), the technique of the operation has undergone various modifications.

One point is to-day well established, viz.: — that except in cases of complete occlusion, necessitating the immediate

opening of the intestine, there is good reason, as has been shown by Maydl (1888) and P. Reclus (1887) to have recourse to the practice advocated by Davies-Colley (1885), but for a time forgotten, that of making two stages of the operation. By this means may be avoided the danger of infection of a fresh wound by the contents of the intestine and the mortality of the operation, we may say, falls to zero.

Some accidents may, however, be noted:

1. Prolapse of the intestine through the artificial anus.
2. Cicatricial stricture of the opening.
3. The development of hernia by a sort of local eventration in proximity to the anus.
4. Fecal incontinence.
5. The passage of fecal matter into the distal portion of the bowel.

The numerous operations of the past few years have been devised with a view of preventing one or the other of these accidents. Thus, to avoid infection of the peritoneum, except in the operation in two stages, suture of the intestine around a tube has been recommended (Paul) and colostomy en penis (Lauenstein); — to prevent the passage of fecal matter into the distal bowel, besides the spurformation (Verneuil, Audry, Desguin, Maydl, Hartmann), section of the intestine with closure of the inferior portion has been recommended (Schinzinger, Madelung, Sonnenburg), constriction of the inferior end (Mosetig-Moorhof), and extensive resection of the intestine (Gangolphe); — to ensure continence, the intestine has been brought through an opening in the rectus muscle (Von Hacker), a loop slipped under the skin (Witzel), gluteal and trans-iliac colostomy has been practiced (Gleich), also the ileo-crural method (Braun), and the symphysial anus of Roux.

An experience already covering seven

years, for my first operations were in the early part of the year 1894, has shown that it is easy to avoid these accidents by following a method which is rapid, simple of execution and excellent in its results, both immediate and remote. The idea of the first step in the operation should be credited, I believe, to one of my former internes, Dr. W. Du Bouchet, now of Odessa, who suggested to me the advantage of following McBurney's plan of opening the abdomen for appendectomy, by separation of the muscular planes in the direction of their fibers instead of by successive incisions. So much said, here is the description of the technic of my operation:

The patient is anesthetized, either by chloroform or simply Ethyl. bromide, the operation being of short duration.

After the customary preliminary cleansing of the skin (disinfection by scrubbing with soap and water, then with alcohol and finally washing with 1 to 1,000 sublimate solution) the field of operation is surrounded by sterile compresses.

The surgeon standing on the left of the patient makes an incision ten centimeters (4 inches) in length at two fingers' breadth within the anterior superior spine of the ilium and at right angles to a line drawn from the anterior spine to the umbilicus, the line intersecting the center of the incision.

The knife divides successively the skin, the subcutaneous adipose layer and the thin fascial layer which covers the fibers of the external oblique muscle.

Nothing is more easy than the separation of the fibers of the external oblique with the axis of the wound.

The opening through the external oblique being made its edges are retracted widely at a right angle to the line of the wound. One of the retractors will be directly over the anterior superior spine, the other in the direction of the umbilicus.

The opening thus made is widened by the retractors in a direction exactly parallel to that of the fibers of the internal oblique which is exposed at the bottom of the wound. These fibers are in turn split apart with a director and a second

pair of retractors introduced, which enlarge the opening in the internal oblique in the direction of the primary incision. The fibers of the underlying transversalis are next separated, exposing the preperitoneal fat. The peritoneum with its fatty layer is lifted into the wound by forceps on either side and a small opening made into the peritoneal cavity. The peritoneal opening is enlarged sufficiently to admit of the introduction of the thumb and finger to search for the iliac portion of the "omega loop."

The search for the intestine is to be made, keeping the exact anatomical relations of the intestine in mind, in the manner following:

The peritoneum being held up into the wound by forceps, to prevent its slipping, the surgeon introduces his index finger under the outer lip of the wound and follows the parietal peritoneum to its iliac reflection, then the iliac peritoneum until the finger is arrested either by colon itself or the mesocolon, when the latter is present. The bowel found is withdrawn and, once outside, can be at once identified as the part sought by its three distinctive characteristics, sacculations, longitudinal bands and the appendices epiploicae. In some cases wherein the meso is particularly short, it may be necessary to search lower down in the pelvis for a loop that can be brought up to the exterior of the wound. Exceptionally, the loop cannot be brought outside ever from the deeper pelvis. This has happened to me twice in thirty cases. In such case I have torn the iliac peritoneum below the intestine, which I have brought to the surface; this procedure has caused only an insignificant oozing of blood, which has been stopped without ligature by the pressure of the gauze, which I pass beneath the intestine in the next step of the operation.

The bowel being drawn well outside, is seized with the thumb and finger and the meso perforated by a Kocher forceps, closed, the operator taking care that the meso and not the bowel is transfixed.

After traversing the meso the forceps is used to draw through the opening a small roll or cravat of iodoform gauze upon which the loop of bowel rests. The

exposed bowel is then packed about with strips of iodoform gauze interposed between it and the edges of the wound. No sutures are employed. The operator, before packing the gauze about the bowel, so adjusts the latter that a longitudinal band is seen on the convexity of the loop parallel to the long axis of the wound. In my thirty cases it has never been necessary to ligate any vessel. This terminates the first stage of the operation. As dressing we cover the loop of bowel and its gauze packing with a compress of sterilized gauze, boric gauze, or sterile cotton, and apply over all a flannel bandage.

Forty-eight hours afterward the outer dressings are removed, care being taken to leave the iodoform gauze undisturbed. The outer dressings may be readily distinguished from the packing by the color.

The intestine is now to be opened. For this we make an opening through the longitudinal band with the Paquelin cautery at dull red heat. This incision, in the afferent loop, should not exceed two centimeters in length, and is made without anesthesia, as the intestine is insensible to cauterization. A moist sterile dressing is applied. Two days later, that is, four days from the operation, if there has been no movement of the bowels, a milk purgative should be given, and after the movement the parts should be irrigated with sterile water and a moist dressing applied.

It is interesting to note the subsequent adjustment of the parts. The opening, at first small, gradually increases in size the mucosa becomes somewhat everted, presenting the appearance of a roseate mushroom around the orifice.

On the sixth or seventh day the iodoform gauze surrounding the intestine is removed, and on the tenth day the piece of gauze which passes through the meso. To remove the latter without risk of interfering with the adhesions, the loop of bowel must be displaced slightly laterally so that the gauze may be cut in its middle, where it is compressed and smaller in bulk than on either side. The intestine shrinks gradually, the mucosa sinks to the border of the skin incision, and the artificial anus is complete in about twenty days.

As the anus is provided with a spur and the intestinal opening has been made in the afferent arm of the loop, fecal matter has no tendency to pass into the lower bowel. The patient will wear at night a small compress to protect the artificial anus from friction, and during the day any of the numerous devices which have been made to prevent the escape of secretions from the intestine.

Patients operated upon by this method are subject to only slight inconvenience by soiling, the anus being continent to a certain degree, and the movements from the bowel become regular.

Further, we endeavor by an appropriate regimen to induce in these cases some degree of constipation, provoking a morning movement of the bowels by an enema conveyed into the upper arm of the loop through a Nelaton catheter.

We have not observed the least complication in any of the colostomies made by this method. The post operative course of the cases has been fever free, and it is astonishing to see the wound gradually reduced to the size of a two-franc piece surrounded by the slightly everted mucosa which, spontaneously, without suture of any kind, becomes united exactly to the skin.

Once, in my thirty cases, in a woman whose iliac colon was without meso and whose abdominal wall had a thick adipose deposit, we observed a gradual narrowing of the orifice. The atresia was remedied by an autoplasmic operation consisting of a freshening of the surfaces above and outside and fastening the mucosa by suture to the skin at the upper angle of the wound, and up to the present the anus has performed its function well for the eighteen months that have elapsed since this second intervention. It is easy of demonstration that patients operated upon after this method, although not having a true sphincter, have an anus that is in a certain measure under control. The finger introduced into either arm of the loop is gripped as it traverses the abdominal wall. Some of the patients pass gas with a slight noise, and in a certain number there is a sensation of desire for a movement.

We have translated Hartmann's paper

pretty closely, as we believe the method advocated has merit over any other procedure, and its extreme simplicity of execution commends it to the beginner. The practice of separation of the fibers of the various muscular planes of the abdominal wall, however, is not so late in date of origin as 1894. It was in use many years before that time, for colostomy, and was recommended expressly with the view of securing a substitute for sphincteric closure of the bowel. We have used the above method in two cases and find that the advantages claimed for it by Hartmann have not been overestimated.

ORIGINAL ARTICLES

A CASE OF GALL-STONES IMPACTED IN THE CYSTIC DUCT.

BY W. B. SHORT, M. D.

PEORIA, ILL.

The following case is presented as illustrating a point of possible value in conservative surgery.

In May, 1900, the writer was called by Dr. Catron, of Pekin, Ill., to operate upon a patient (Mrs. K.), who for four years had suffered from frequent attacks of biliary colic. The case had been in the hands of Dr. Catron for about one year, and he had by homeopathic treatment succeeded to a considerable degree in reducing the frequency and severity of the attacks. Still the condition was one in which surgical interference seemed warranted, as the patient was yet, even after her improvement, an invalid a great portion of the time.

Examination disclosed a tumor about the size of a man's fist in the right side of the abdomen. This tumor was quite freely movable. With the patient standing its lower margin was slightly below the level of the umbilicus. It could be lifted by the hand and forced almost completely beneath the costal margin. With the patient in the recumbent position it could be made to retreat into the lumbar region and could be detected posteriorly by bimanual palpation. A peculiar feature of the case also was the fact that when the tumor took its position anteriorly

only the lumbar region of the right side was so noticeably sunken that the patient herself had observed it.

At operation a vertical incision was made in the right hypochondrium downward from about at the tip of the ninth costal cartilage. On entering the abdominal cavity the gall-bladder was found to be almost completely covered by rather firm omental and colonic adhesions. These had formed themselves into such a compact mass that they had considerably increased the size of the tumor as palpated before operation; and the motility observed at that time was seen to be due to unusual freedom of movement on the part of the liver.

When the adhesions were removed the gall-bladder itself proved to be only slightly larger than a fully distended normal organ. But it was exceedingly rigid, and resistant to the finger, so much so that firm pressure produced no perceptible fluctuation. It was, however, smooth and apparently nearly normal in outline, and the finger passed externally as far as the region of the cystic duct detected no irregularities to indicate the presence of stones. Only the greatly thickened and indurated tissues could be felt.

The next step being to enter the gall-bladder, it was found practically impossible to draw up and effectively to unite its fundus to the parietal peritoneum owing to the extreme rigidity and friability of its walls. Iodoform gauze was therefore used to wall off the peritoneal cavity, an aspirating needle was inserted into the gall-bladder, and a few drams of sanguineo-purulent fluid evacuated.

Incision by scalpel was now made into the fundus. The tissue cut like a piece of leather. The walls were found to be about one-fourth of an inch in thickness and instead of collapsing on evacuation of the fluid they remained rigid like the shell of a gourd. Search within the bladder cavity failed to discover any stones—an instrument passed deeply to the region of the beginning of the cystic duct detected nothing of that nature. There was no flow of bile. The cystic duct was evidently occluded, the patient's condition prior to the operation having indicated a patulous

tract from the liver to the duodenum. A rubber drainage tube was now inserted into the gall-bladder and the abdominal wound closed to the gauze surrounding this tube.

The patient's home being near Peoria, the writer was able to conduct the after-treatment. Nothing unusual was observed for a number of days. The gauze was removed on the second day and the gall-bladder irrigated for the first time on the third day. The discharge was gradually diminishing. On the fifth day a probe passed into the gall-bladder immediately detected a hard body. The opening was then dilated, dressing forceps inserted, and a gall-stone about the size of a hazelnut removed. Thorough search was made for more with both finger and instrument, but no others could be found.

But the cystic duct was still apparently closed, for in the succeeding days the discharge, which was now only small in amount, became quite serous in character and no biliary secretion was observed. On the ninth day, however, when the bandage was removed, the dressings were seen to be saturated with bile. This of course showed a patulous cystic duct. The obstruction had been removed. A probe passed into the gall-bladder again encountered a hard substance. The opening was once more dilated, for it had closed down tightly about the drainage tube, and this time two stones, each slightly larger than the first, were removed. The three stones presented facets indicating their position in line in the cystic duct.

Following this there was nothing of particular note concerning the case. The wound edges rapidly approximated and at the end of five weeks from the time of the operation the biliary fistula had closed. The patient soon resumed her household duties and has remained well to the present time. Where, as in the above case, stones are impacted in the cystic duct, and even if detected at the time of operation as they might be in cases presenting no great amount of inflammatory thickening of tissues, would it not be wise to permit them to liberate themselves after removing the pressure

behind them by evacuating the gall-bladder and keeping it open for a time? Owing to the high mortality attendant on operation upon the ducts, conservative treatment, which would prove effective in these cases, might be worth considering.

In cases of empyema of the gall-bladder, also, where at operation the cystic duct is not found to be patulous, occasional exploration of the gall-bladder before the fistula closes might in some cases reveal a liberated stone which had figured in the etiology of the disease, and which, if not detected, would be liable to excite a recurrence of the trouble as some future time.

FRANKLIN AND FOURTH STREETS.

LITHOTOMY AND LITHOLAPAXY.

The Indian Medical Gazette of Calcutta devotes its entire number for August, 1900, to the subject of operations for stone in the bladder. It is a somewhat curious fact that the operation of litholapaxy devised by Henry J. Bigelow of Boston should have been carried to its highest state of perfection in far-away East India. Such is the case and it is flattering to the memory of the American surgeon that his operation has been taken up with enthusiasm, its scope extended to patients of all ages, the technique remaining practically as he left it.

India is pre-eminently the land of calculi and opportunity exists in some districts there to acquire experience in stone operations, such as can be found nowhere else.

It would seem that a study of the enormous amount of material to be found in the stone districts of India should give us some information on the etiology of vesical calculus, but, according to the Gazette, only one general deduction can be made, and that is, that calculi are much more frequent among natives of the wheat-eating districts than among those of the rice-eating districts. The theory that the presence of lime in the drinking-water is to be held responsible is negatived by the fact that stone is rare in many provinces where the water contains lime. Another cause, suggested by Cunningham, the concentrated state of the urine in hot weather, may be contrib-

utory, but it does not seem to be operative in other tropical countries.

In connection with the papers on stone are published notes from early articles on the same subjects, which show the history of stone operations in India. Dr. A. Simpson published in 1854 a paper on 186 cases of stone operated on by him by lateral lithotomy. Forty of these cases were in pre-anesthetic days. The mortality rate for all his cases was 4.8 per cent. Up to 1867 most of the operations were by the lateral method. Lithotripsy was not successfully introduced, for, as remarked by one surgeon, natives would not remain in hospital long enough after a lithotripsy to get rid of fragments; after a lithotomy they had to stay until healing of the wound had taken place.

In 1882-3, Dr. P. J. Freyer published his experience with Bigelow's operation in twenty cases, and in March, 1884, added a report of fifty-seven additional cases, concluding the latter by remarking that "as yet no instruments have been invented by which litholapaxy can be performed with safety in males below the age of puberty." Two months later Surg.-Major D. F. Keegan reported having done twenty-four litholapaxies on male children with one death. In 1888 Keegan states that further experience in children has strengthened his conviction that litholapaxy is the best method of extracting the majority of calculi to be met with in the bladders of male children and boys; but the surgeon must provide himself with a large assortment of fully fenestrated lithotrites of small size, from $4\frac{1}{2}$ or 5 (English Scale) to No. 10.

From this time (1884) the operation of litholapaxy has been established one in India for the majority of cases. For boys below 12 years of age it has not come largely into favor in other countries, as it seems to require special aptitude for its performance on the part of the surgeon. This aptitude, according to the Indian surgeons, is best acquired in practice on adults.

For stones of unusual density or size Forbes-Keith introduced in 1891 the operation of perineal litholapaxy in which a "giant" lithotrite is used through a small median incision in the perineum.

By this means large stones can be attacked with almost as much safety as can smaller ones through the urethra. In 1896 Baker reported from Hyderabad 1,754 urethral litholapaxies with a mortality rate of 1.31 per cent., and 253 perineal litholapaxies with a mortality rate of 1.91 per cent. This showing is marvelous. In 1897, Baker published two series of (200 and 204) 404 cases of litholapaxy in which the ages of the patients ranged from under one year to 78 years of age, the mortality being 0.742 per cent.

Some of the Indian surgeons express their preference for perineal lithotomy in cases of perineal fistula, stricture of the urethra, enlarged prostate, severe cystitis, etc.: others would do perineal lithotomy in cases needing drainage, or supra pubic lithotomy for cases with associated tumor or enlarged middle lobe of the prostate. Stricture of the urethra may be rapidly dilated or cut, and in cases requiring drainage the latter may be made effectively by a small perineal median incision at the conclusion of the litholapaxy.

Supra-pubic lithotomy has found little favor in India, the lateral being the operation of choice with most surgeons. As an instance of the low mortality of lateral lithotomy in Indian children we may cite the statement of Capt. Birdwood, M. D., that Freyer did 200 lithotomies in children with one death. An argument in favor of lithotomy vs. litholapaxy has been made that lithotomy ensures the complete removal of the stone, while in litholapaxy fragments may be left to form nuclei for future stone formation. Such accidents are not likely to occur to the expert. It is not likely that any such records as the above will ever be established in this country. The successful practice of litholapaxy in children requires for its expert performance more experience than is likely to fall to the lot of more than a very few operators.

We should, did space permit, be glad to present our readers with the tables of thousands of operations from the Gazette, but enough has been quoted to show the remarkable results attained by litholapaxy in a country where the abundance of material in skilled hands produces the highest attainable results.

When we open the abdomen in tubercular cases, we should carefully observe the extent of the lesions, how far the disease extends over the peritoneum, and more particularly the condition of the retroperitoneal glands. I find any amount of extension over the intestines and peritoneum interferes with a good prognosis.—H. Kelly.

In dislocation of the astragalus the bone is either partially or completely separated from its surrounding articulations, and if a wound exists, and any portion of the bone protrudes, it is compound. The direction in which the bone is displaced is specified by the terms forward, backward, outward, inward, etc.

Bacteriological Research Work.

Joseph McFarland, M. D., the well-known bacteriologist, formerly of Philadelphia, attracted by the unsurpassed facilities for research work afforded by the biological laboratories of Parke, Davis & Co., has removed to Detroit, Mich. Dr. McFarland will devote himself strictly to scientific work in his favorite field. Mindful of the rapid progress of bacteriology, of its brilliant promise for the future, and of the labor which many men throughout the world are now devoting to the discovery of biological remedies for the principal infections, Parke, Davis & Co. have employed a large staff of research workers for these investigations, given them every needed appliance, and exempted them from all routine duties. As was to be expected, some of this work has come to naught, but, for the most part, it has finely justified itself, and their plan for the first year of the new century is to prosecute more energetically than ever before a series of experimental researches into the etiology, the pathology, the toxic products, and the possible cures of the various infections.

Dr. McFarland's connection with the Detroit Laboratories will add great strength to the corps of workers.

Anyone can tell when a gonorrhea begins, but it requires more than human knowledge to prognosticate when it will end. — Ricard.

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The curettement of the uterus is by far a more dangerous operation than that of abdominal section, and I think the consensus of opinion of gentlemen who have had a large hospital experience, will be that more women are crippled for life by the use of the curette, either dull or sharp, in the hands of an incompetent general practitioner or a gynecologist in embryo, than any other one procedure in surgery. I have, myself, removed not less than thirteen uteri, subsequent to incompetent curettement.—B. Sherwood-Dunn.

Septic inflammation of the sheath of a tendon should be treated promptly with cold steed. The incision should be free and extend down to the sheath, but no farther until the field has been carefully inspected and the overlying connecting tissue separated with a sharp knife. Then, if the sheath is found to contain fluid, incise it freely. If not, place a gauze drain in contact with it, but not pressing greatly upon it, and fill the external incision lightly with gauze. Watch carefully for an extension on its proximal side of the tendon, and if it occurs, treat it as the primary point.—J. L. Andrews.

The prognosis in cases of penetrating gunshot wounds of the abdomen treated on the expectant plan is extremely bad, the death-rate being about 90 per cent.

my
Say

That an agreeable person is one who agrees with you.

That people who talk too much don't realize it till the next day.

That tact does not remove difficulties, it goes around them.

That anyone can borrow a book, but it takes a gentleman to return it.

That a man's idea of heaven is a place where everyone is as good as he is.

That a man's idea of heaven is a place where everyone is as good as he is.

That our sympathies may be with the under dog but our money is always on the one above.

That our sympathies may be with the under dog, but our money is always on the one above.

That some men are born great, some achieve greatness, and some are not worth a continental.

That some men are born great, some achieve greatness, and some are not worth a continental.

That it doesn't matter much what church you belong to just so there are cushions on the seats.

That the dead past should be compelled to take out a burial permit before disposing of its dead.

That it's all very well to advise a man to begin at the bottom and work up, but supposing he wants to dig a well?

That it's all very well to advise a man to begin at the bottom and work up, but supposing he wants to dig a well?

That the wicked flee when no man pursueth, but it's a poor sort of a citizen who wouldn't pursue a wicked flea.

That the wicked flee when no man pursueth, but it's a poor sort of a citizen who wouldn't pursue a wicked flea.

MEDICAL ERA

CH. GATCHELL, M. D., EDITOR

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NO. 4

LABORATORY DIAGNOSIS.

The aid to diagnosis afforded by chemical and microscopical examination of the tissues and fluids of the body, and of pathological products, to-day comprises one of the most important chapters in the science of medicine. Deprived of this, medicine would be set back a quarter of a century.

As the result of examination of the urine presents an index to the condition of the kidneys, as well as to the state of the general system in certain diseased conditions, so will examination of the blood reveal other diseased conditions which can be determined by no other known method of diagnosis. In cases of masked malaria, without distinctive clinical symptoms, only by the aid of the microscope, in blood examination, can a positive diagnosis be made. The knowledge gained by examination of the blood, likewise, affords the only crucial sign in differential diagnosis between the various forms of essential uremia. In typhoid fever and in pneumonic fever, a doubtful diagnosis can be made positive by aid of the intelligence gained by what the blood reveals.

Those who are not familiar with the methods of diagnosis referred to, and, more especially, those who, through lack of such knowledge, evince a want of confidence or of faith in them, do so because they do not understand their relative importance. They erroneously infer that the result of a bacteriological diagnosis, or of a blood analysis, is all that is necessary to

establish a diagnosis in any given case. In this they are wrong. No such claim is made, or ever has been made, by bacteriologists. The Widal test, for instance, obtained by means of the blood of a subject, does not alone and of itself, mean that the patient has typhoid. It means that, given a case which appears to be typhoid, the existence of the Widal reaction would establish the diagnosis. The Widal reaction is but one symptom among others. But it is a symptom of great importance, because it is present in a greater number of cases than is any other single symptom. In many cases the rose-spots may be absent, or the right iliac tenderness, or the characteristic evacuations, or other symptom, but the symptom presented by the Widal reaction is present in fully ninety-five per cent of cases. No other single symptom is present in so large a proportion of cases. Hence its value in diagnosis of typhoid.

And so in other diseases. The demonstration of the Klebs-Loeffler bacillus means that a patient is suffering from diphtheria only when other symptoms of diphtheria are present. Of itself, it is but a single symptom, and it is to be taken into consideration in connection with all the other symptoms of the case.

The "new diagnosis," as it has been called, does not replace the old — it supplements it.

According to the view stated by a worker in a clinical laboratory in New York, as reported in "Pediatrics," physicians who do not understand the require-

ments of these methods, may be divided into three classes:

(1) Those who have studied microscopic diagnosis with some intelligence, and whose specimens are properly prepared for the work requested,—who know what they want and ask for what they need (smallest class). (2) Those whose notions of what the microscope may reveal are in general correct, but who have not been at the pains to learn how to prepare their specimens. These are the men who send diphtheria cultures with the swab thrust into the culture-medium as deeply as possible; or “blood to be examined for malaria” with the blood firmly coagulated between two adherent cover-glasses (larger class). (3) Those who know neither how to prepare their specimens nor what help the microscope can possibly afford them in a troublesome diagnosis. These men send fermenting urine in dirty bottles to be tested for “typhoid bacilli;” plump and blooming boys to “have their red cells counted;” patients who have not had a chill or an elevated temperature for months to be examined “for malaria;” or bits of tough beefsteak passed per rectum as probable specimens of “carcinoma of the colon.” And (to our professional confusion of face) this is the largest class!

Clinical diagnosis is not all of diagnosis, but of all single methods it is the most exact.

AMERICAN INSTITUTE.

Our National association will meet June 18th, at Richfield Springs, New York.

Richfield Springs is a popular resort, with ample hotel accommodations. All members of the Institute, and all those who contemplate becoming members, should attend this first meeting of the new century.

ORIGINAL ARTICLES

DIET AND CHRONIC INTERSTITIAL NEPHRITIS.

BY CLIFFORD MITCHELL, M. D.

PROFESSOR OF RENAL DISEASES IN THE CHICAGO HOMOEOPATHIC MEDICAL COLLEGE.

In those who have no obstruction to the free flow of urine the foremost cause of chronic interstitial nephritis is now thought to be long-continued irritation of the kidneys from the passage through them of the products of imperfectly digested food. The disease is notoriously common among those who “live well,” as the expression is. Inasmuch as those who “live well” consume a great deal of meat, we have concluded that it is the meat which is the cause of the nephritis. But if those who “live well” be watched carefully, it will be observed that in addition to eating meat they eat and drink a good many other things. And after they have eaten too much meat plus too many other things they depress the nervous system by smoking strong cigars, by late hours, business tension or worry, or excessive venery. Now, it is admitted, I believe, that it is harder to digest meat when at the same time sugars and starches are eaten freely. The person may be able to manage the sugars and starches without an attack of “indigestion,” but at the expense of imperfect digestion of the meat. This may possibly explain why it is that persons who boast that they have always been able to digest “anything” finally succumb to contracting kidney.

The kidneys in such cases have suffered in silence, as is their wont, for years. Proof of the innoxious character of nitrogenous food alone without sugars and starches is to be had from observation of diabetics in whom, as a rule, nitrogenous diet fails to produce chronic interstitial nephritis. We must reason, therefore, that it is not the eating of meat alone which causes contracting kidney, but the imperfect digestion of it from various causes coupled with imperfect elimination from various other causes.

A healthy man may eat a pound or two of beef in a day with impunity, regardless of the theoretical inability of the kidneys

to dispose of the waste matter if, at the same time, he looks after the ventilation of his rooms, sleeps his healthy quota of hours, drinks water only and that in plenty, exercises moderately in the fresh air, avoids sweets and excess of starches, and does not depress his nervous system by excessive smoking, worry, or venery. That this is not an idle statement may be proved by the writer's own experience of fifteen years or more of beef eating, three times daily, with not an hour missed from his profession because of illness during the entire period nor a single attack of headache. On the other hand, a single so-called "banquet" of a dozen courses of more or less indigestible food, including a good deal of meat, the smoking of several cigars, and the drinking of various wines, may immediately give rise to all the phenomena so clearly described by Dr. Haig, in his interesting book on Uric Acid. Or if the eating of meat be coupled with the drinking of beer similar ill-effects may be noticed. Chilling of the surface of the body under such circumstances leads to repeated congestions of the kidneys, and is undoubtedly a factor of importance in the etiology of contracting kidney, a disease of the temperate zone in localities where sudden changes in the weather are common.

The question of what happens to the kidneys of those who eat more meat than the theoretical allowance of five ounces, may be answered as follows: If the eating of meat be properly conducted without the concomitants mentioned above, fifty ounces of urine in the twenty-four hours will contain 500 grains or more of urea and 10 grains, or even more, of uric acid, and the kidneys be none the worse for it. If, on the other hand, the eating of meat be improperly conducted, the amount of urea may be large enough, but the quantity of uric acid will fluctuate widely, a trace of albumin appears, sooner or later becoming two to five per cent bulk and which after "banquets" is especially noticeable. The individual in the latter case first notices loss of muscular strength, and then headaches or persistent neuralgias. Later he has either acute uremic attacks or the cardiac and vascu-

lar symptoms now so well recognized as phenomena of chronic interstitial nephritis.

The prophylaxis of contracting kidney then narrows down from a practical standpoint to limitation of the amount of meat ingested or to care not to overload the stomach with sweets and starches in the case of individuals who eat meat freely. It is difficult not to say impossible to convince the average layman in good health that he is eating anything which in time may kill him. He is, however, more or less open to conviction along the line of moderation. It often happens that owing to the wretched cookery, unfortunately almost universal in the United States, meat is about the only dish upon which a man doing brain-work can nourish himself. It is idle, therefore, to expect a person at the mercy of a Swede servant girl to starve himself to death in order to avoid the remote contingency of contracting kidney. But if physicians would insist that a person obliged to live largely on meat should avoid sweets and excess of starches and drink plenty of water, some practical good might be accomplished.

When once the disease has become established the problem of diet is serious. In cases where headaches are severe the writer appears to have demonstrated that there is a relationship between meat-eating and the headaches, and believes that no meat at all should be allowed patients subject to severe attacks of cephalalgia. In other cases the amount of meat to be allowed can in general be guessed at by the amount of albumin in the urine and the symptoms of the patient. For example, the writer recalls one case in which the amount of albumin for some time merely a trace rose to two per cent bulk during the twenty-four hours following hearty eating of beefsteak at dinner. Milk as a steady diet in chronic interstitial nephritis is not to be thought of, as it fails to nourish the patient properly. On the other hand buttermilk, made from good whey, is probably of great value as an addition to the diet. The writer thinks that not enough attention has been paid to buttermilk as an article of diet in con-

tracting kidney. The patient who lived the longest of any under the writer's observation subsisted almost wholly for years on buttermilk. This same patient broke his oculist's record for length of time of survival after onset of albuminuric retinitis and, although he finally died the cause of death was pyaemia from carbuncle. Other articles of diet usually allowable are oysters, fish, sweetbreads, bread and butter, cereals, and not too acid fruits. Chicken should be fresh-killed and well-cooked. In the writer's experience nothing is more common on the tables of Americans than tough chicken, and it is exceedingly doubtful whether as such it is allowable. When meat in small quantity appears to do no harm a small, tender, well-cooked mutton-chop is the desideratum; the leathery article usually in evidence is not to be thought of. Beans and peas are not only nitrogenous but flatulent and should be forbidden. An excellent dessert is baked apple, especially in the case of those inclined to constipation. Those who can not eat apples on account of difficulty in digesting them should have them baked for not less than three hours, until they are almost a jelly. The action of them even then on the bowels is marked. In the matter of fruits, such as grapes and peaches, too much care cannot be exercised in selecting ripe ones.

In fact, the question of diet is in the writer's opinion quite as much one of how the patient's food is selected and cooked as it is one of what he eats. Poor cookery kills more Americans in the long run than almost anything. Without wishing to disparage the value of time spent in the study of bacterial diseases the writer regrets that an equal amount of time is not given to the study of diseases which may be prevented by closer attention to the selection and cooking of ordinary food.

70 STATE STREET.

Dr. Keyes says that it is a well-known fact that one of the prominent hatters on Broadway, New York, years ago made a special hat for old men in the bottom of which was a compartment in which a catheter could be placed.

TREATMENT OF GONORRHOEA.

BY W. S. WHITE, M. D.

CHICAGO.

PROFESSOR OF SKIN AND VENEREAL DISEASES IN
THE CHICAGO HOMOEOPATHIC MEDICAL COL-
LEGE.

This paper is not written with the intention of giving a complete treatise on the subject of gonorrhoea, but it is a short review of the efficacy of local treatment which is attracting the attention of the genito-urinary surgeon of the present day, and which the writer has been using in hospital and private practice for the past five years.

The internal medication has not materially changed, and methylene blue, which is given in one- to three-grain doses every three hours, has up to the present time produced no startling results, although in many instances it has seemed to be of great service in reducing rapidly a gonorrhoeal discharge without the aid of an injection. Further investigation with this preparation will be required before we can know the character of cases in which it will be useful.

It has always been the aim and desire of the profession to cure acute specific urethritis (Gonorrhoea) in the shortest time possible. In so doing it too often happens that routine methods are employed; hence the newer and at times more efficient measures have not been used.

Since Neisser discovered the gonococcus the surgeon has been constantly working to find something that will destroy the micro-organism without causing too much irritation of the tissues. The urethral mucous membrane of some individuals affords a more favorable culture medium for gonococcus than others; hence every case should be treated individually. It generally happens that the surgeon is called upon to treat a case of gonorrhoea complicated by a patient, who is of the most unruly type, taking all sorts of risks and doing many indiscreet things, which, were the doctor able to foresee, he would undeniably inform the patient that he could not take charge of his case. Therefore, when a patient presents himself to the surgeon with a spe-

cific urethritis he renders all assistance possible, carrying out instructions to the letter, it is painful to be obliged to admit, that methods fail, or that he does not readily respond to treatment.

Where there is a history of exposure to gonorrhoea of recent date, accompanied by a few premonitory symptoms, such as tickling, itching, burning, and slight moisture about the meatus, the anterior urethra, after being washed with water as hot as the patient can endure (he having previously voided urine), a solution of Protargol, from 2 per cent to 5 per cent (according to the susceptibility of the individual), two or three drachms in amount, is to be injected into the urethra, and there retained for at least five minutes, three or four times each day. Or the urethral mucous membrane suspected of being diseased may be exposed by means of a urethral speculum, and the tissue wiped off or swabbed with a solution of Silver-nitrate 15 to 20 grains to the ounce, Argonin 10 per cent solution, or a 10 per cent solution of Protargol, night and morning, for two or three days, at the end of which time all symptoms will disappear if the treatment has been successful. The Permanganate of potash is likewise of service, beginning with a 1-4000 solution as hot as can comfortably be borne; irrigate the anterior urethra night and morning with at least half a gallon of the fluid, increasing the strength of the solution at each sitting until 1-1000 is used at the end of the third or fourth days. If all evidence of gonorrhoea has disappeared, gradually reduce the strength of the solution at each treatment, and discontinue its use the seventh or eighth day.

The above measures are constantly being employed to abort an attack of gonorrhoea, with many excellent results. If they fail the treatment has done no harm to the advancing disease, hence we are justified in attempting its suppression whenever an opportunity presents.

The surgeon should give all these treatments himself, so that no part of the technique may be overlooked. On the other hand, the patient must render all assistance possible by abstaining from excitement of all kinds, stimulants especially.

Live upon a milk diet and keep as quiet as possible. If he can go to bed and remain there for a few days, so much the better.

The object of the abortive treatment is to destroy the gonococcus before it has burrowed deeply beneath the epithelium and thus prevent the mucous membrane of the urethra from being invaded, for if it once becomes infected the disease is bound to run a course, mild or severe, according to the patient's susceptibility to disease.

When the discharge has made its appearance, the inflammation, itching, burning, swelling, and all other characteristic symptoms of gonorrhoea are present, and the microscope reveals the presence of gonococci, two methods of treatment are at our disposal, a conservative treatment, which consists of hygiene, cleanliness, prohibitory diet, with the discontinued use of stimulants and all dissipation which in any way irritate the system, rest in bed if possible, accompanied by such internal remedies as may be indicated. In this manner the case is carried through the inflammatory stage, after the subsidence of which injections should be employed to complete the cure.

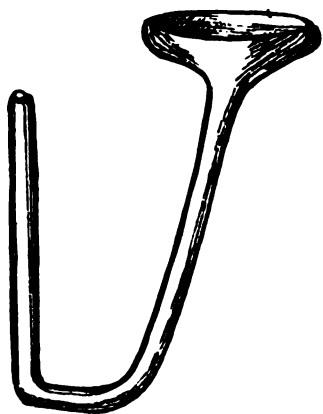
As the gonococcus thrives in an acid medium the urine should always be rendered as nearly alkaline as possible, no matter which method of treatment is employed.

The active treatment which is given in this paper, is first that of irrigation, which is to be used from the beginning of a gonorrhoeal attack.

This treatment is not new. As homeopaths we are proud to be able to state that Samuel Hahnemann advocated the use of irrigations in gonorrhoea, and I can not do better than quote his words, and display a cut of the apparatus used by him, from chapter 2, paragraph 59, of Hahnemann's "Lesser Writings."

"For the proper treatment of the gonorrhoea, however, in order to remove superficial inflammation of the urethra, and to make it insensible to the irritation of the venereal matter (the most important consideration in the second stage), we should inject as often as possible into the urethra as far as the seat of the gonor-

rhea, a fluid which possess the power of doing both these. Three grains of opium are to be dissolved in 30 drops of sweet spirits of nitre, and the solution mingled with an ounce of water which contains three grains of acetate of lead in solution. The thin tube, an inch and a half long, of the small tin syphon here delineated, is



to be carefully inserted into the fore part of the urethra, whilst the penis is allowed to hang down; the funnel-shaped part of the instrument is to be held betwixt the fore finger and thumb of the left hand, and the tepid fluid above described dropped into the funnel-shaped opening of the small syphon, ten or twelve times a day, each time for a minute or longer. The fluid overflows out of the narrow end, exactly at the ordinary seat of gonorrhoea, and forces its way down by the side of the instrument, and out of the mouth of the urethra; whereby only those parts of it are moistened which require the application of the remedy. The patient performs this little manœuvre himself most readily when standing. He can thereby do no harm. All the inconveniences of the ordinary syringe are obviated by this contrivance. (The patient should previously make water each time.) Even when there is great sensitiveness of the urethra, so that the syringe dare not be employed, this operation may be performed, and that without difficulty. The rounded end of the tube should be moistened with milk or cream, before being introduced into the urethra. We may increase the opium and acetate of lead in one ounce of water gradually to five grains of each."

Goldberg and Janet strongly cham-

pioned the use of irrigation in acute gonorrhoea, but with few followers. The old rubber catheter with the fountain syringe was not satisfactory, the catheter at times caused too much mechanical irritation to the urethra.

It remained for F. C. Valentine of New York to perfect an apparatus which is convenient and handy. The records show over 6,000 of this apparatus now in use.



The accompanying cut shows Sharp & Smith's improved irrigating apparatus. This apparatus consists of a glass perculator capable of holding one-half gallon of fluid with a rubber tube reaching from the perculator to the patient, who is sitting or lying (the tube should be six to

eight feet in length). The glass irrigating point is blunt, the same as the blunt-pointed gonorrhoeal syringe. A cut-off appliance is adjusted to the rubber tube, which gives control of the flow of fluid, a bell glass just in front of the compressor prevents the fluid from getting on to the physician's or patient's clothing. The urethra is distended with fluid, which then is allowed to escape around the end of the irrigating point, the perculator is raised or lowered at will by means of a pulley.

At the very outset of the disease, when a specific urethritis is assured the Permanganate of potash treatment is to be given, and I cannot do better than present the rules laid down by Valentine himself:—

1st day a. m., Anterior irrigation, 1-3000
 1st day p. m., Anterior irrigation, 1-4000
 2d day a. m., Anterior irrigation, 1-3000
 2d day p. m., Anterior irrigation, 1-4000
 3d day a. m., Intra-vesical irrigation 1-6000
 3d day p. m., Anterior irrigation, 1-5000
 4th day a. m., Intra-vesical irrigation 1-5000
 4th day p. m., Intra-vesical irrigation 1-5000
 4th day p. m., Anterior irrigation, 1-2000
 5th day noon, Intra-vesical irrigation 1-5000
 6th day noon, Intra-vesical irrigation 1-5000
 7th day noon, Intra-vesical irrigation 1-5000
 8th day a. m., Intra-vesical irrigation 1-5000
 8th day a. m., Anterior irrigation, 1-3000
 8th day p. m., Intra-vesical irrigation 1-5000
 8th day p. m., Anterior irrigation, 1-2000
 9th day a. m., Intra-vesical irrigation 1-4000
 9th day a. m., Anterior irrigation, 1-1000
 9th day p. m., Intra-vesical irrigation 1-4000
 9th day p. m., Anterior irrigation, 1-1000
 10th day a. m., Intra-vesical irrigation 1-4000
 10th day a. m., Anterior irrigation, 1-1000
 10th day p. m., Intra-vesical irrigation 1-5000
 10th day p. m., Anterior irrigation, 1-500

The hours at which irrigations are to be administered have been fitted to the exigencies of most physicians' office hours. It is always advisable, when irrigations are to be given twice in one day, that they be made twelve hours apart.

The above treatment, according to the records of Goldberg and Janet, and practically confirmed by Valentine, give the following results:

60 per cent of acute gonorrhoeas cured within 10 days.

30 per cent of acute gonorrhoeas cured within 14 days.

10 per cent of acute gonorrhoeas were not cured.

Whenever it has been the writer's privilege to employ this method, his results have been equal to those of the above table. But I must say this, that as the majority of patients either cannot or will not, spare the time necessary to do justice to the irrigation treatment, and as they can not in most cases be convinced that the expense will not be greatly increased by its use, it has been necessary to use the following methods, which are now becoming very popular and the results are very gratifying, to say nothing of their convenience.

Nitrate of silver is always serviceable, but being rather severe upon the tissues it is not a good plan to place it in the hands of the average patient, for fear of doing him harm.

There are several preparations of silver now upon the market which can be used without danger to patients who will follow instructions; of these argonin and Protargol are the most popular, and at present attracting the attention of the genito-urinary surgeon. Both of these preparations are readily soluble in water and a fresh solution can and should be made, for every patient; as both of these remedies are about equal in efficacy, the Protargol being the latest and most frequently used, it alone will be dealt with.

When a newly-acquired case of gonorrhoea presents for treatment, the patient, having voided urine, a half of one per cent solution of Protargol, sufficient in quantity to distend the urethra gently, should be injected into the urethra with the ordi-

nary blunt-pointed urethral syringe. This fluid must be retained for at least five minutes (while the solution remains, with the free hand very gentle massage is applied to the distended urethra), then allowed to escape from the meatus; a second injection the same as above, with the same manipulations and for the same length of time is given, followed by a third one. Thus fifteen to twenty minutes will be consumed at every treatment. This procedure is to be repeated three or four times daily. Each day increase the solution one-quarter of one per cent until a two or three per cent solution is being used. When the seventh or eighth day is reached the discharge will have ceased. Should the injection be stopped and a few migratory gonococci remain in the urethra, they would immediately cause a reinfection, and the discharge would rapidly return, hence the injection should be employed for several days after the discharge has ceased, the solution being gradually reduced in strength.

With this treatment a majority of cases get well in two days to two weeks, and a goodly number of the remainder are cured in three weeks, while the balance run the full course of six to eight weeks, with very few reaching the chronic or glutty stage.

Valentine does not claim a cure-all, but does with irrigation, that which cannot be done with conservative methods.

To sum up the benefits of local treatment (irrigation and injections) in gonorrhoea, as described, it can safely be stated that many complications are done away with, instead of having posterior urethritis to a greater or lesser degree in over 80 per cent of cases treated, it is reduced to 50 per cent, and in many instances even a lower percentage is recorded, while strictures seldom develop.

Before dismissing a patient the surgeon should always examine microscopically the secretions from the anterior and posterior urethra for gonococci, and, finding none, after having passed a sound to ascertain whether a stricture is present or not, and if there be none he can discharge his patient feeling that he has done his duty.

31 WASHINGTON STREET.

ON THE MODE OF ACTION OF DRUGS IN THE CRUDE FORM AND IN DILUTE SOLUTION, WITH AN ATTEMPTED INTERPRETATION OF HAHNEMANN'S THEORY OF "DYNAMIZATION."

BY CH. GATCHELL, M. D.

CHICAGO.

PRESENTED TO THE INTERNATIONAL HOMOEOPATHIC MEDICAL CONGRESS OF 1900, PARIS, FRANCE.

The mode of action of drugs in the animal system is a subject which has engaged the attention of the most earnest minds. The fathers of medicine were not without their theories, which, in accordance with the limited knowledge of their days, were necessarily crude and erroneous.

With his extraordinarily active and masterful mind, Hahnemann also gave expression to his views on this important subject.

It is my purpose in the present paper to submit for the consideration of the members of the International Homeopathic Medical Congress of 1900 an attempted explanation of the mode of action of drugs, both in the crude form and in dilute solution, and also to present what appeals to me as being a rational interpretation of Hahnemann's theory of "dynamization," all based upon the modern theory of electrolytic dissociation.

At the meeting of the American Institute of Homeopathy in 1898, E. H. S. Bailey, Ph. D., Professor of Chemistry in the University of Kansas, U. S. A., in an intensely interesting and very original paper, (1) in accordance with the terms of the theory named, made clear the changes that take place in the process of solution of drugs, and, in a manner which seemed to satisfy the demands of accurate knowledge, he so explained the matter as to give increased confidence to the homeopathic physician in the potency of his attenuations.

As applied to the problems to be discussed in the present paper, the theory of electrolytic dissociation teaches that matter in solution consists, not of divided

(1) "The Proof of the Law of Similia from the Electro-Chemical Physiological Standpoint." Transactions of the American Institute of Homeopathy. 1898.

particles of the original substance in its molecular form, held in suspension in the solvent, but that in undergoing solution the molecules of the original matter become split up (dissociated) into ions, which are atoms, or groups of atoms charged with electricity. (2)

Ions are of two kinds, cations, which are charged with positive electricity, and anions, which are charged with negative electricity.

The splitting up of the electrolyte (3) into ions is called "dissociation."

The amount of dissociation depends upon the degree of solution. In a complete solution there are no molecules of the original matter present; only ions, into which the molecules have dissociated.

For instance, a watery solution of potassium-chloride does not consist of the solvent holding in suspension an infinite number of molecules of KCl; it consists of water having in solution ions of K and Cl.

But if the degree of solution is not so great as to have dissociated all the molecules, then the solvent contains some undissociated particles or molecules of the original matter, and some ions. (4) With increase in the amount of solvent more of the molecules of the original matter become dissociated, until finally the dissociation of molecules is complete and the solution contains only ions. (5)

(2) Ions are atoms or groups of atoms which have the same composition as the substances which are formed from the Electrolyte by the action of the electric current. Ions are charged with electricity. "Physical Chemistry." By Dr. Ch. Van Deventer. Amsterdam, Holland. 1897.

(3) An electrolyte is a substance capable of conveying electricity by the movement of ponderable particles.

(4) "In the case of electrolytes in incomplete solution a part of the substance exists as the original molecule, and a part is dissociated into its ions; as the solution is further diluted, more and more ions are formed, until finally the substance is in a complete state of dissociation; that is, all the particles are ions." E. H. S. Bailey, Transactions of the American Institute of Homeopathy. 1898.

(5) In all the strong acids, bases, and most of the salts the dissociation is complete at about one-thousandth normal.

This knowledge leads us to the next important fact, which is that the properties of a solution are not the properties of the original matter, but the solution has new properties, which are determined by the ions, into which the original matter has become dissociated. The new properties represent the sum of two constants, the one the cation and the other the anion. (6)

The application of the theory of electrolytic dissociation to an explanation of the action of drugs in the animal system follows from what has already been said.

Medicines prepared according to the method of Hahnemann consist of solutions, or, as we call them, "dilutions," of the crude drug. Our dilutions — when of sufficient degree of attenuation — contain none of the crude drug, or its molecules, in original form. All attenuated preparations of medicines — "dilutions" are solutions of ions, of the two kinds, cations and anions.

Consequently when introduced into the animal system our dilute solutions of medicines act, not by virtue of the properties of the original crude drug, but by virtue of the properties of the ions, into which molecules of the original drug have become dissociated.

Let us, now, inquire in what way the ions of the medicine act upon the animal system?

The proposition may safely be made that in the biochemical changes taking place in the animal system (as also in inorganic chemistry), (7) all processes in which solutions of electrolytes take part

(6) The properties of a solution are the same of a constant for the cation and a constant for the anion."—H. C. Jones, Ph. D., Instructor in Physical Chemistry Johns Hopkins University, Baltimore, Md., U. S. A.

(7) "Chemical reactions in which acids and bases are involved are known to be reactions involving only ions, molecules, as such, not coming into play. The number of reactions known to be purely ionic is very great, including the majority of cases with which we have to deal in chemistry."—H. C. Jones, Ph. D., Instructor in Chemistry Johns Hopkins University, Baltimore, Md., U. S. A. "Johns Hopkins Hospital Bulletin," June, 1898.

are due to the direct action of ions upon ions. (8)

Moreover, it may be stated that medicinal substances in solution do not act upon formed matter.

There is no action directly upon the muscular fibre, upon connective tissue, or upon the cells of parenchymatous organs. The action is in every instance upon the nuclei of the cells. (9)

In the composition of cell nuclei water represents 98 per cent. In solution in the nucleus are the ions of the body. (10) When drugs in dilute solution are introduced into the body, the ions of the solution are carried to the nuclei of the cells. Here it may be assumed that ion acts upon ion. As a result of such action changes are wrought in the nucleus of the cell. These changes, secondarily, exert an effect upon the cell itself, and by this means nutritive processes are affected, functional activity is altered, and changes in the system are produced. It is in this way the medicinal substances act in producing the changes in the system which result in the cure of diseased conditions. This may be claimed to be the mode of action of drugs when introduced

(8) The power of a frog's muscle to absorb water in the presence of acids is dependent upon the number of hydrogen ions present—upon the dissociation of the acid.—Jacques Loeb, Ph. D., Professor of Biology in the University of Chicago, U. S. A.

"All that the spermatozoon needs to carry into the egg for the process of fertilization are ions."—Jacques Loeb, Ph. D. "The American Journal of Physiology," Vol. III, No. 3.

(9) "The dynamic influence of drugs is exerted upon the living matter of the body—upon its protoplasm."—Richard Hughes, M. D. "Manual of Pharmacodynamics." Fifth Edition. 1886. Page 60.

(10) C. Schmidt calculates that one blood-cell contains about the one-billionth part of a gramme of potassium-chloride. This corresponds to the tenth degree of decimal dilution. Hence, there are only ions present; no molecules.

(11) In this discussion the chemical and mechanical action of drugs is not being considered; only the physiological or therapeutic action.

into the system in dilute solution; this is therapeutic action. (11)

But, as is so well known, medicinal substances, according to size of the dose administered, have two different effects in the system, called the primary action, and the secondary action. A poisonous dose of the crude drug produces the primary effect; the drug in dilute solution produces the secondary effect.

Now, in the crude drug the molecules are undissociated, or, but partly dissociated. Consequently a solution of the crude drug is a solution of molecules, with no ions, or with but a limited number of ions. Therefore, the mode of action of a crude drug in the system is determined by the molecules, and is the action of molecules. The molecules, like the ions, are conveyed by the blood to the nuclei of the cells. It is in the nuclei of the cell that their effect is exerted.

The action of the crude drug is of a contrary nature to the action of the same drug in dilute solution. This is equivalent to saying that the action of molecules on the nuclei of the cells differs from the action of ions; and the effect of the action of the molecules is opposite in character to the effect of the action of the ions. The one, in the nuclei of the cells, disturbs and inhibits functional activity; the other stimulates functional activity. (12) The one is the action of molecules, the other is the action of ions.

Therefore, as a conclusion to what I have here set forth, I would submit the following propositions:—

1. That the action of concentrated solutions of medicinal substances in the animal system is the action of the molecules of the substance;

That the effect of the action of the molecules is to depress function and to disturb nutrition, and represents primary action.

2. That the action of dilute solutions of medicinal substances is the action of ions; That the action of ions is to stimulate

(12) "Every substance which in large doses abolishes the property of an organic element stimulates it if given in small doses."—Claude Bernard, quoted by Richard Hughes.

function and promote nutrition, and represents secondary action.

To the theory of electrolytic dissociation we may look not alone for an explanation of the mode of action of drugs in the system, but, as it appeals to me, it offers as well an interpretation of Hahnemann's theory of "dynamization."

Although the dual action of drugs was recognized before Hahnemann's time, yet it was owing to his genius that the facts were established on a scientific foundation.

Hahnemann observed in the effect of drugs on the system two different modes of action, determined by two different methods of preparation. The crude drug, he found, has a pathogenic effect; it is a disturber of function, and a degenerator of tissue. He found that the same drug in dilute solution acts in disease to restore the system to the normal performance of function, to arrest degeneration and to promote healthy cell growth.

Furthermore, Hahnemann not only found that dilutions of active agents acquired properties not belonging to crude drugs, but, what was still more out of the line of ordinary experience, he also found that substances (13) which in crude form were inert as medicinal agents, acquired therapeutic powers when prepared in dilute solution. (14)

Here was an entirely new phenomenon, with which the world of medicine never before dealt. (15)

The inference that the facts that I have stated presented to Hahnemann's mind was that substance in dilute solution possess some newly-acquired property, some newly-developed force, absent in the original substance.

This newly-revealed phenomenon re-

(13) Such as silicea, calcarea carb., natrum muriaticum.

(14) "There is no such thing as a perfectly insoluble substance." "The Scientific Foundations of Analytical Chemistry." Wilhelm Ostwald, Ph. D., Professor of Chemistry in the University of Leipzig.

(15) "Solubility is only comparative. Some substances are more soluble than others."—E. H. S. Bailey, Ph. D., Professor of Chemistry in the University of Kansas, U. S. A.

lating to the action of medicinal substances called for explanation.

Possessed as he was of a philosophical mind Hahnemann readily proffered a theory. He attempted to account for the new display of energy on the part of the dilute solution by attributing to it the acquirement of the development of a new force, which he called "dynamic." This "dynamic" force was considered by Hahnemann to be of a "spiritual" nature, and in describing it he used the terms "spirit-like" and "dynamic" interchangeably. (16) In the light of the knowledge of his day it is not surprising that Hahnemann should have sought to account for the unusual phenomena that he observed by attributing them to a "dynamic," "vital," or "spirit-like" force. At that time the world of biological science was not yet free from the influence of the school of Montpellier, sustained by Borden and Barthez in France, by Reil in Germany, and by Erasmus Darwin in England.

These teachers in biology had an immense influence on the thought of the day, and to a vague "vitalism" was attributed all the phenomena of organic life. Hahnemann shared these views. He looked upon disease as being a disturbance of the "vital" force, (17) or, as he called it, the "spirit-like dynamis. (18)

Thus influenced by the prevailing doctrines in biology, Hahnemann sought to explain the observed phenomena of the action of dilute solutions in consonance therewith. (19) To this we owe his theory of "dynamization."

This theory, as advanced and explained by Hahnemann, has been long since rejected by the leading thinkers of our school. Various explanations of the po-

(16) "The physician cannot free the vital force from morbid disturbances except by the spirit-like (dynamic) powers of remedies."—Organon. Sec. 16. Wesselhoef's translation.

(17) "Diseases are produced only by the morbidly disturbed vital force."—Organon, Sec. 12.

(18) "That spirit-like dynamis (vital force) animating our body."—Organon, Sec. 15.

(19) "Healing remedies restore health only by virtue of their dynamic action on the vital force."—Organon, Sec. 16.

tency of drugs in attenuation — which it is known that they possess — have been offered by many observers, but, for the most part, our most earnest thinkers have been willing to accept the fact and to await the explanation.

But, as it appears to me, the time has come when an explanation is offered for which final acceptance may be asked.

I would submit for the consideration of the members of this Congress that the theory of electrolytic dissociation gives the explanation of the potency of drugs in dilute solution.

I would further submit that electrolytic dissociation also affords for Hahnemann's theory of "dynamization" an interpretation which is in accord with the accepted teachings of modern science.

In the light of this doctrine Hahnemann's theory becomes clear and reasonable. It may be thus stated:

The crude drug consists of molecules; the dilute solution consists of ions. Molecules are electrically neutral; ions are electrically charged. Consequently, when in dilute solution the drug is in a radically altered state. It has developed a form of energy (electric) which in molecular state it did not possess. (20) In its altered state the substance is possessed of new properties. By virtue of the new properties thus developed, substances which before solution had one effect on living cells, now, after dilute solution, have another effect.

Hahnemann, observing in medical substances, with altered form a new display of energy, and also observing evidences of newly-acquired forces in substances previously inert, sought an explanation for these unusual phenomena. In so doing, he evolved his theory of "dynamization." According to this theory Hahnemann assumed that in dilute solution the

(20) This new form of energy is not, of course, a creation of force, but, in accordance with the law of the correlation of forces, to which there is no exception, it is a transmutation of chemical energy. The atoms composing the molecule are held in combination by chemical energy. When the molecules become dissociated into ions the chemical energy becomes converted into electric energy.

medicinal substance acquired a new force which he variously termed "spiritual," "vital," or "dynamic."

When we consider the state of knowledge of chemical and biological processes as it existed in Hahnemann's time, his theory cannot be looked upon as being violent. But now it cannot be accepted.

To-day, however, we may interpret Hahnemann's thought anew. In the light shed upon the subject by the developments of modern science it may be announced as an established fact that medicinal substances in dilute solution do acquire a new form of force, by virtue of which they become endowed with new properties.

The changed condition of the medicinal substance on undergoing dilute solution is that of ionization (electrolytic dissociation); the newly-acquired force is the electric energy with which all ions are charged.

In the manner here indicated may the theory of "dynamization" be interpreted. And, with reference to the subject involved, in this closing year of the nineteenth century, Samuel Hahnemann again is vindicated.

92 STATE STREET.

From New England Medical Gazette.

THE LOCAL USE OF ARSENIC IN MALIGNANT ULCERATION.*

BY GEORGE L. VAN DEURSEN, M. D.

LOWELL, MASS.

In our present age of brilliant surgical work, where the skillful operators may be counted by the score, instead of marking here and there a solitary individual who has achieved distinction in this direction, we are many times inclined to call in the services of the knife in conditions where the proper medicinal treatment would give more permanent if less immediate results.

In malignant growths of the epithelial class, Epitheliomas, Carcinomas, etc., where they come to us sufficiently early to permit of their complete excision, the operative treatment is generally advisa-

*Read before Boston Hom. Med. Society, Oct. 9, 1900.

ble; but in that large number of cases where the patients consider their trouble as only a simple matter, till ulceration is far advanced and the surrounding tissue deeply infiltrated with the growth, or in case of recurrence after removal, we must look to medicine rather than to surgical interference.

In the use of arsenic in these conditions I have nothing to present which is either original or novel. You are all familiar with the general therapeutic action of the remedy and with its specific action on the skin.

My only excuse for this paper is to recall the method of employment introduced and advocated by one of the most careful observers of our school (I refer to Dr. J. S. Mitchell, of Chicago), and to record several cases which have been successfully treated by that method.

Dr. Mitchell is not the pioneer in the local use of arsenic, nor does he claim any such position, for the drug has been used in pastes and powders since the beginning of the practice of medicine. His only claim to originality is in "the use externally of homeopathic triturations of sufficient power to cause disintegrating effects, combined with continuous internal medication."

The relation existing between arsenic and various forms of epithelial hyperplasia, malignant ulceration and tubercle formation has been understood and noted by writers of all schools of practice, but it has remained for the fathers of our own school to properly interpret this relationship and to apply the remedy according to the laws of similars, where properly indicated.

Whether the continuous use of arsenic will produce true cancer, as has been claimed by some eminent old school authorities, is not essential, but the provings of the drug show unmistakably the tendency to ulceration and gangrenous sloughing, accompanied by the intense stabbing, burning pains which characterize carcinomata and kindred growths.

In addition to this intense action of the drug we have the milder manifestations seen in the waxy parchment like skin, so closely simulating the late cancerous cachexia, and the dry, scaling, itching eruptions

with which we are all familiar.

Allen, in his "Handbook of Materia Medica," says: "Arsenic is above all a tissue drug, ranking with phos. and antimony. An irritant poison . . . the skin is irritated, and violent itching and burning are followed by eruptions and finally ulceration. Glandular action is first excited then diminished."

In studying the symptomatology of the drug we find, "Skin white and pasty, or dark and livid, dry and rough. Eruptions around the mouth, burning and painful, itching, worse from scratching. Red herpetic eruptions around the mouth. Ulcers on face with burning pain. Fleshy excrescences spring from ulcers, soon become gangrenous. Ulcers with thin bloody pus coming from under thin scab. Indurations and tumors becoming ulcerative."

Farrington, in his wonderfully written "Clinical Materia Medica," tells us that arsenic alters the blood. It is useful in low types of disease when blood changes are serious. The inflammations of this remedy are characterized by their intensity and by the tendency to the destruction of tissue.

In these local inflammations of arsenic you will find burning, lancinating pains the characteristic sensations. It tends to produce induration or hardening of the skin, rendering it a valuable remedy where there is thickening of the skin with copious scaling."

With such authorities before us the homeopathic use of the drug in these cancerous conditions is readily understood.

It is not necessary at this time to go into any of the various theories in regard to the cause of epithelial growths; the fact which does concern us is that there are certain new growths springing from embryonic tissue, developing to a certain point, then undergoing retrograde changes instead of going on to full development.

In the treatment of these growths many methods have had their advocates — the knife, chemical or actual cautery, pastes, ointments, internal and external medication.

In many cases of primary growths

where the affection is well localized, a clean incision, involving sufficient of the healthy tissue to preclude the probability of recurrence, may be effective; but even then the constitutional condition needs correction by proper medication.

The actual cautery and the stronger caustics are extremely painful, they involve a large area of healthy tissue in connection with the growth, and their employment does not prevent recurrence.

The caustic pastes are open to the same objections and the irritation produced by them in many cases causes the growths to take on new activity.

Electricity in its various forms has been used to a greater or less extent, but its practical utility has not been fully demonstrated.

The method to which I wish to call your attention, and with which many of you are no doubt familiar, is the use of a homeopathic trituration of arsenic, giving the 3x internally, usually about three times a day, and applying the 2x locally, three to six times a week, according to the conditions.

It is advisable to cleanse the surface thoroughly with peroxyde of hydrogen, then apply carbolized linseed oil freely over the raw surface and dust on the 2x trit., covering all ulcerating tissue. The carbolized oil is a preparation of one part pure carbolic acid in twenty parts linseed oil. It is recommended by Dr. Mitchell for cleansing and disinfecting purposes and helps hold the powder in place. In places where an outside dressing is required, after dusting on the powder cover with a layer of gauze, moistened with carbolized oil, and over this a layer of absorbent cotton held in place by adhesive straps.

Dr. Mitchell speaks of the use of hoang. nan, chloride of chromium, and other remedies to assist the action of the arsenic in some cases, but in the following cases it was not necessary to call on any of these supplementary agents.

Case I. W. T. Expressman. When first seen was suffering with an epithelioma of the right side of the lower lip. It was a typical "smoker's cancer," having undoubtedly been caused by the irri-

tation of the heated clay pipe held constantly in the one position.

He came under observation the first week in January, 1894. At that time the growth involved nearly one-half of the lower lip, the ulceration exposing an area as large as a quarter of a dollar, and the surrounding induration caused a thickening of the lip to at least five-eighths of an inch. The sanious discharge had been weeping down over the chin, setting up a severe irritation and threatening a general spreading of the condition. The ulcerating surface was at once cleansed with peroxyde of hydrogen followed by a thorough application of carbolized linseed oil and a free dusting with ars. 2x trit. As the ulceration extended over on to the inside of the lip, pieces of cotton saturated with peroxyde were placed between the lip and teeth to prevent the irritation from the teeth and to keep the surfaces as clean as possible. These were renewed several times a day as conditions required.

Internally he was given tablets of ars. 3x tid., and was furnished with a vial of the carbolized oil and another of the 2x trit. with instructions for its local use at home. He reported at the end of a week, at which time the growth showed noticeable improvement. It was again cleaned carefully with the peroxyde of hydrogen and the oil and ars. applied as before.

He was seen twice after this at periods of two weeks; improvement was marked at each time and he was discharged, cured, the latter part of February, having been under treatment, practically, two months. He was given another vial of the tablets and continued taking one every day for about a month. The growth was entirely removed, all induration absorbed and the reddened scar tissue soon faded to normal color.

He has been seen frequently in the six and one-half years since then, and there has never been any indication of recurrence.

Case II. L. M. Weaver. Native of Quebec. Age 47. About twelve years ago noticed a small growth on right side of nose about size of a pea. It grew very little till he began treatment. About six

years ago it was removed by actual cautery, but returned in about four weeks and was soon twice the size of the first growth. A year later he had it cut out, followed by recurrence in four or five weeks, larger than before.

Two years ago he had it removed by a plaster. The treatment was very painful, but it healed perfectly and gave no trouble for about six months, at which time it began to grow at upper margin of the old cicatrix. It grew slowly for about a year, then began to ulcerate; scabs would form and remain for two or three days, then loosen, and from beneath it would come a thin muco-purulent discharge.

When he came to me for treatment, Aug. 28, 1899, there was an open ulcer nearly the size of a ten-cent piece covered with a scab, which on removal showed an excavation that would have taken a large marrowfat pea. The edges of the ulcer were hard and raised. After cleansing the cavity and surface with peroxyde of hydrogen, the carbolized oil and ars. 2x trit. were applied and 3x tablets given, as in the previous case. Dressing was done twice a week at first, later four times a week.

By the last of September the growth was sloughed out, except at the upper border, and the excavation was filling rapidly with healthy granulations. It was now dressed only twice a week, applying the arsenic only to the points where the growth seemed to persist and dressing the remainder of the wound with calendulated boracic acid powder.

Improvement was steady, the excavation filled to a smooth surface, and the patient was discharged Nov. 24, 1899, cured.

There has been no recurrence up to the present time, and the patient was seen within the past week looking well.

Case III. Mrs. H. R. American. Age 42. History on father's side negative. Mother's sister died of consumption. Another sister died from cancer of breast.

Patient always delicate, had usual diseases of childhood. Always troubled with neuralgia. Was married 1888, has not

lived with husband for 21 years. During this time general health good.

Four years ago had trouble with heart, palpitation, shortness of breath, and a persistent hoarseness. She was under treatment for these troubles by several of the best physicians of our city with partial relief.

In December, '98, first noticed a small lump in upper lip near left nostril, which seemed to be between the skin and inside of the lip. This gradually enlarged, and in the course of two or three months extended to right nostril and ulceration began. She used iodoform, carbolic salve, and other "home remedies," under the advice of friends.

During this time she was under the care of one of our best surgeons (not of our school, however), who tried to console her by telling her "not to be frightened till he was," while he prescribed some simple healing lotion. Aug. 17, 1899, came to my office for treatment. At that time the entire upper lip was involved. It was thickened to about three times its normal proportions, the color was a dark livid, and ulcerated patches covered the greater part of the surface, extending into the mucous membrane at the lower border and above, involving both nostrils for a distance of three-quarters of an inch or more. To the left of the nose it spread upward on the cheek and nodules could be found just below the internal canthus.

She complained a great deal of burning and some stinging pain. Treatment was begun at once, employing the same method as in the other cases. It was dressed twice a week, usually, sometimes three times, and the 3x tablets of arsenic were given internally.

Improvement was noticeable after a few dressings, and continued rapidly over the lower portion of the growth, but for a time there was a tendency to spreading at the upper border, causing some anxiety as to the possible effect on the eye should extension in that direction continue; this was finally checked, however, before any serious results occurred.

This treatment was continued till near the last of December, '99, at which time

the ulceration was entirely healed, the induration and thickening almost gone and her general condition much improved. The purplish livid color had changed to a brighter hue more like normal scar tissue; she was given some of the carbolized oil for local use at home, and the internal administration of the arsenic was continued.

About the middle of January a small nodule made its appearance a little way inside the left nostril, but one application of the oil for a few days caused its rapid disappearance.

The patient has reported about once a month since she was discharged, and up to the present time it seems to be a complete cure. The lip has regained its normal color, and it is only on close inspection that some small lines of cicatricial tissue can be seen. She says she is feeling better than for years, and works regularly at her old place in one of our large mills.

Three cases cured, or benefited, do not prove the applicability of the treatment to all conditions of this general class; they do show its usefulness in some of these destructive lesions.

I regret that I have no personal experience to relate regarding its use in those cases of malignant ulceration of the breast, which we are too often called upon to treat, owing to the neglect of an early operation.

In one case of deep ulceration of the posterior lip of the cervix, involving the entire posterior vaginal fornix and threatening perforation of the cul-de-sac, it has seemed to retard the progress of the disease, and at times to almost promise some slight improvement, but this case is still under treatment, and it is too early to report any definite result.

This was one of those unfortunate cases where a radical operation was advised more than a year ago, but refused. The case went elsewhere, received so-called "local treatment," with the result of steady progress of the disease.

When she again came under observation the condition had gone too far to render operation advisable, and the "Mitchell treatment" was resorted to only as a palliative measure.

Diagnosis of Pregnancy in the Earliest Months

Within the past year or two a number of distinguished accoucheurs have laid great stress on a relatively new diagnostic sign of early pregnancy. Winter was the first to observe an irregularity in the shape of the recently gravid uterus, which he ascribed to partial contraction. Early in 1899 Fernwald showed that there was irregularity in both the shape and consistency of the womb after gestation had begun. By the end of the first month, one side is distinctly thicker than the other—often twice as thick, in fact. This thicker horn is also softer than its thinner fellow. It is also possible to feel a sulcus between the two horns, both in front and behind, which divides the uterus into two unequal portions.

Fernwald would explain this difference in size and consistency by the fact that the ovum must develop in one side of the uterus. He naturally assumed that the thicker and softer side represented that portion of the uterus in which the ovum had lodged.

When the above paper was read Lott took issue with the author as to the cause and nature of the phenomenon, and were inclined to favor Winter's view that it was of spasmodic origin. Schauta thought that the asymmetry was due to disproportionate growth, but held that the ovum should be found in the smaller and firmer side.

Heil has recently investigated this subject for himself, and found the new sign in about one-half the patients examined. In some cases the asymmetry was not lateral, but antero-posterior.

Quite recently Piskacek has prepared a monograph upon this interesting subject. This author concludes that the asymmetry which is undoubtedly present in the newly-pregnant uterus is a purely physiological phenomenon not due to contraction.

This asymmetry in consistency will, of course, recall Hegar's long-known sign of softening of the lower segment of the uterus in pregnancy of a more advanced period.

SURGICAL ERA

CHAR. ADAMS, M. D., EDITOR

CHICAGO, APRIL, 1901

GENITO-URINARY SURGERY.

At the Cornell Medical College, New York, an address was delivered recently by Mr. Reginald Harrison of London on "Retrospects and Prospects in Genito-Urinary Surgery." Mr. Harrison pointed out the debt of the profession to the late Professor Bigelow for his method of Litholapaxy, which stands to-day practically as he left it — the method over all others, in the hands of the expert, for dealing with vesical calculus. With Bigelow's method should also be ranked the work of Otis on the urethra, which demonstrated the capacity of that channel for much larger instruments than, up to that time, had been in use. In a recent number of the *Era* we called attention to the wonderful results achieved by the East Indian surgeons in the treatment of stone by litholapaxy. Harrison suggested also that American enterprise, with the splendid laboratory facilities now available, should prosecute researches on the etiology of vesical calculus, in which line little or nothing has been done since the work of Rainey, published in 1851. Rainey showed that stones could be artificially produced when the solution of certain salts dissolved in urine was disturbed by the presence of unfavorable factors.

Further investigations should be made to determine the exact nature of the disturbing factors, and, what is of still more importance, their prevention.

Regarding the interesting subject of prostatic hypertrophy Mr. Harrison takes a conservative stand. Of the White-Ramm operation and vasectomy he says: Undoubtedly the method of treatment,

whether by removal of the testicles or vasectomy, has given a certain measure of successful results. These results are so variable, however, as to leave the subject almost more obscure than before. In certain cases the measure of relief afforded is very striking. In others practically no good is accomplished.

The brilliant success which has followed extra-vesical operations in some cases and utter failure in many others have led to more careful study of the different forms of obstructive enlargement of the prostate, so that in the near future it may be possible to select treatment for any given case according to an exact ante-operative diagnosis. It is quite clear that an obstruction of the vesical urethra by an enlargement of the prostate due to adenomata is not likely to be relieved by any procedure except removal of the tumors. For the cases in which obstruction is produced by a simple hypertrophy of the gland, extending upward and backward into the bladder, the operation of Bottini is probably the safest and most efficient procedure in use. It is the simple hypertrophies also that castration or vasectomy may be of service. In cases wherein a tongue of prostatic tissue or a median lobe overlaps a pouch in the bladder no measure save removal of the obstructing tissue by suprapubic or median section will be curative. The vague term enlarged prostate must give way to definite diagnosis and treatment used according to the pathologic condition found. No single method can be of general use.

The surgery of the kidney has been marked by important advances during the past forty years, as shown by the increas-

ing number of successful operations for the various forms of venal dilatation, tumors, calculus, mobility and other painful affection of the kidney. "The interesting question for us just now is, what is there in the future of the surgery of the kidney? Is there, for instance, anything that can be done by surgical means for the relief of albuminuria or for the prevention of the development of degenerative conditions?" Some years ago Mr. Harrison published a paper in the *Lancet* in which he considered the effects of tension arising out of excessive excretory efforts on the part of the kidneys and resulting in congestion and inflammation, which in some instances are probably more disastrous and far-reaching in their local consequences than the severe surgical conditions of the kidney already mentioned. There can be no doubt that congestion of severe degree or long standing may do serious damage to the delicately organized renal structure. Every surgeon of much experience in operations on the kidney has probably seen cases in which severe congestion of the kidney has been the condition found when the organ has been exposed and incised on the diagnosis of some other condition. It has also been noted that in many instances incision of the kidney, with subsequent drainage, has relieved the condition. For this condition of extreme congestion Harrison offers the name of renal glaucoma and suggests for its relief an antiseptic exploration with puncture of the tongue fibrous capsule.

Such puncture, or better, incision, of the capsule, should relieve the tension and is not dangerous as an operation. Such cases as a rule go from bad to worse under medical treatment, and it is possible that surgery may, properly applied to these cases of congestion, be highly valuable as a prophylactic measure against serious renal disease.

ORIGINAL ARTICLES

SOME OBSERVATIONS OF ETIOLOGY AND TREATMENT OF APPENDICITIS—WITH CASES.

BY C. B. WALLS, M. D.
CHICAGO.

CLINIC SURGICAL ASSISTANT AND LECTURER ON
SURGICAL PATHOLOGY IN THE CHICAGO HOMEO-
PATHIC MEDICAL COLLEGE.

The vermiform appendix is a glandular organ, similar to the tonsil, and like that organ, is also liable to follicular, mucous, and submucous infection and ulcerative disorders.

Inflammation of the appendix is most common in young adult life, said to occur more frequently in man than woman (4 to 1), although Ochsner and McRae believe that appendicitis is frequently diagnosed as ovaritis and salpingitis, and that these errors probably account for the theory of its greater frequency in men.

As predisposing factors we have the following: errors in diet, constipation, neighboring catarrh, typhoid and tubercular processes; torsion, constriction, strains, trauma, blows upon abdomen, etc. Also irritating fecal matter, hard secretions, cherry stones, apple, grape and orange seeds, buttons, etc. These pass into the appendix and set up irritation, causing congestion, which is apt to leave a denuded surface, on account of desquamation of epithelium, thus leaving the part more prone to infection. Seymour Taylor maintains the majority of cases of appendicitis are the result of infection by bacteria in tissues around the organ, that foreign bodies play but a small part in the affection; catarrhal conditions pave the way for the more severe inflammation of bacteria; some others claim that the inflammatory process of appendicitis is almost invariably started by bacillus coli communis, although it may be started by micro organisms, especially staphylococcus, pyogenes and streptococcus.

A. O. J. Kelly teaches that appendicitis is a complex process, that no one factor can be held answerable as the cause in all cases, although the disease is always the result of infection.

The question of treatment has been much discussed, and the most ardent ad-

vocates of medicinal treatment for this disease admit that there are 60 per cent of recurrences. We believe if the pathology and character of the disease were fully appreciated, that is, that it is an infectious disease chiefly, and on account of the inaccessibility of the part except by radical measures, this would inevitably suggest operative interference, or expose the patient to fatal possibilities.

Price of Philadelphia has put this phase very pithily thus, "How often have you heard medical men say, I have never had a death from appendicitis, and in almost the same breath declare they have lost some from peritonitis. No one doubts that now and then a case will recover by some happy accident, the abscess breaking down into some hollow viscera or to the outside. This is an accident, not treatment; better call it neglect, instead of treatment." This fact should be more forcibly driven home, by the additional item that out of 146 amputated appendices, which were carefully examined, 132 were found perforated.

Preparation for operation is begun, usually, the day prior to the date set for operation, the abdomen is thoroughly scrubbed with green soap and washed successively, with ether and alcohol, or spirits of turpentine, then the whole field of operation is covered with a moist antiseptic compress, carb. acid or bichloride of mercury, compress is covered with parafin paper, and the whole kept in place with a large roller bandage. The alimentary canal is emptied, or as nearly so as possible; evening before operation patient is given a good laxative, in the morning, after the fecal movement, the bowel is given a thorough flushing with warm sterile water.

After the patient is under anesthetic influence, and placed upon the operating table, the compress, etc., are removed and the abdomen again scrubbed with green soap, washed with ether, and alcohol or spirits of turpentine, then the field of operation is protected with sterile towels, until patient, operator and assistants are all ready.

The operation, the first incision is made over McBurney's point, obliquely running parallel with Poupart's ligament; the

length of this incision will vary with cases, where there is an abscess or where there are adhesions of the viscera more space is required, so that the incision may vary from 2 to 4 inches. This first incision is made through the skin and covering of external oblique, and after McBurney the fibres of internal oblique and transversalis are separated to avoid hernia; this separation may be made with a spud or blunt instrument, and so expose the fascia and peritoneum; a small opening in this is made to admit the index finger, the viscera are explored until appendix is located; if it is adhered, enlarged or much inflamed extra care is exercised in releasing the organ, to avoid rupture. When released from adhesions, or where none exist, the appendix is now dissected down close to the caecum, a circular incision is made around the base, a serous cuff dissected loose, the appendix is now ligated at this point, using fine silk for the ligature, then packing around the abdominal incision with Iodoform gauze, to catch any septic matter the appendix might contain, and so prevent infection of abdominal cavity, etc. The organ is next amputated, applying to the stump a drop of 95 per cent carb. acid, wiping this off with sterile gauze; then after Dawbarn putting a circular Lembert suture around the stump one-fourth inch from base, the stump is pushed into the lumen and this purse-string suture drawn taut and tied. All hemorrhage controlled by forceps, vessels are tied, oozing arrested by fine catgut sutures, etc. Where there are adhesions in abdomen they are broken up and strands removed, the cavity washed out with a hot salt solution, and this continued until solution flows back clear. Occasionally where there have been adhesions, some oozing or where the patient is weak either on account of prolonged operation or physical condition, the abdomen is left full of salt solution. Whenever there were adhesions, and around the seat of appendix, the parts are dusted with aristol freely.

During the search for the appendix, the viscera is frequently exposed, parts so exposed are kept moist and warm with abdominal sponges, wrung out of hot sterile water.

The closing of the abdomen is as follows, the edges of peritoneum and fascia of transversalis are approximated and united with fine catgut; the transversalis, internal and external oblique muscles are each successively approximated to their fellow and united by stout catgut sutures. Lastly, the skin is approximated and united with fine catgut sutures. Dusting the wound surface with Iodoform or Aristol, placing over the incision two strips of Iodof. gauze; it may now be hermetically sealed with flexible collodin; or on top of the Iodof. gauze several sterile dressings and two or three pads, these being held in place with a large roller bandage, and patient put to bed.

For a few days after the operation the patient is given a light liquid diet; occasionally after third day patient is given a cathartic, salts, etc., to flush the whole intestine; after a free, copious movement, and no temperature, patient is put on "full tray"—a moderate meal, including meat, etc. The patient remains in bed from 16 to 21 days, when he or she leaves the hospital the surgeon warns the patient to avoid extra lifting or strain upon the abdominal walls for several weeks, else rupture may occur.

Prognoses of operation are thus summarized:

I. If operated on at very beginning of symptoms, almost all cases recover.

II. If operated on by the third, unless the case is one of the fulminating variety, the mortality varies, up to 10 per cent.

III. If operated on after the fourth day, it is too late for relief, unless it be to afford the benefit of a chance, object being to evacuate pus or limit the septic process; few surgeons advise operation at this time, unless there are indications of an abscess, and then only as a last resort.

IV. Many of the so-called medicinally cured cases of appendicitis have severe relapses, even fatal; although catarrhal attacks may occur and be cured of that attack, to recur.

V. Many cases cured by amputation have recurring attacks of pain, which might be diagnosed as appendicitis, but for the history of operation, such symptoms, as a rule, arise from adhesions. Some cases have been operated on

for supposedly primary appendicitis, and appendix could not be found.

VI. The mortality of radical operation for appendicitis, during the quiescent period is practically nil, the only danger possible is that of hernia, but if the operation is thoroughly aseptic and severed tissues securely coapted, this danger is eliminated.

The following illustrative appendicital cases were operated on by Prof. Charles Adams in the amphitheatre in the C. H. M. C., the histories and records of same were taken by the writer.

No. 7. June 4, 1900. Miss L. H., 16 years, Waterloo, Iowa.

History: June, '98, was seized with severe pain in right inguinal region, pain very severe; this lasted 48 hours, confined to bed two weeks. Second attack Dec., '98; last attack May, '00. Mother of patient attributed first attack to a strain, from a long bicycle ride.

Operation, after manner described; upon reaching viscera, caecum and colon were adhered to abdominal wall, appendix hypertrophied and adherent to caecum; when dissected away appendix was $3\frac{1}{2}$ inches long and much congested, with fine arterioles over its surface. For three (3) days subsequent to operation, this young woman had some abdominal disturbance, gas, etc., otherwise her recovery from operation was uneventful and complete; discharged June 26.

No. 29. Oct. 22, 1900. A. T., 13 years, Kewanee, Ill.

History: July 4, 1900, had first attack of appendicitis, confined to bed about 10 days; second attack July 20; another attack soon thereafter; last attack about Oct. 1. There is no pain now in appendix region, but there is some discomfort on palpation. Patient had been operated on when 11 years of age, for circumcision and hernia, and family attributed appendicitis as result of infection at said operation, but there is no grounds for such a thought.

Operation: After the manner of that described; no subsequent trouble; patient discharged from hospital cured Nov. 12, 1900.

No. 39. Dec. 26, 1900. J. S. K., 30 years, printer, Chicago.

History: About two years ago had pain in right inguinal region, at first not sharp but in course of a few days became so painful as to make him "double up;" later the pain became dull, gnawing or eating; this pain has continued more or less severe, with occasional painful attacks. (This patient is one of those kind that you would rather the other fellow had, he knows so much and would not be advised.)

Examination reveals a large mass in right iliac fossa, fully as large as one's fist; patient affirms growth is always larger at night; on palpation, the mass is somewhat lobulated; diagnoses suspected carcinoma; this diagnoses had been made by Prof. Adams nine months ago; at the time of operation the Dr. remarked that he was of the opinion the patient had "exceeded his hour of grace."

Operation: After abdomen was opened as for appendectomy, it was found full of adhesions, caecum one mass about $5\frac{1}{2}$ inches long and 2-inch calibre, hard and irregular in outline, but firmly adherent to surrounding structures, a large amount of strong adhesive bands all over interior of abdomen. After dissection of full length of growth, the intestine was tied above and below the growth, with Iodoform gauze, some of same gauze was placed beneath the intestine, before cutting it, to prevent fecal matter or septic material entering the cavity; the growth was then removed, ends of intestine approximated and united with Lembert sutures, all raw or oozing surfaces protected or turned in with cambric needle and fine catgut.

During the operation, which occupied about $2\frac{1}{2}$ hours, patient became very weak, receiving some hypodermic stimulation, abdomen washed out and filled with salt solution, then closed in usual manner, and put to bed. Patient came out from anesthetic extremely weak, for several days had various stimulants, such as coffee, strychnia, hot high flushing with salt solution, also gave champagne, milk with lime water, liquid peptenoids, etc. Later nausea and vomiting set in and patient died 60 hours after removal from operating table. There were no signs of

peritonitis or leakage, but patient vomited and passed per rectum a dirty brown liquid; as there was no post-mortem, cause of death, presumably, carcinoma of stomach.

No. 40. • Jan. 8, 1901. L. P., 22 years, leather cutter, Chicago.

History: Feb., 1900, a horse kicked him in right inguinal region; was not confined to bed or even off work; following May had an attack of "colic," which confined him to bed two weeks; has had several of these attacks; day before Christmas had last "spell," when he reported at clinic Dec. 28. Writer could not fully examine patient because of rigidity of abdominal walls; promised to return some days later for operation. This morning he was seized with another attack, so that this may be considered as an acute case.

Patient a powerful fellow and had only taken a heavy meal when seized and came into the hospital on the run.

Operation: Was prepared for operation on operating table, scrubbed field of operation with green soap and brush five minutes, washed with sterile water, then alcohol, ether and spirits of turpentine successively. Incision over McBurney's point, muscles very thick and juicy; as a consequence there was much oozing; appendix was much inflamed $4\frac{1}{2}$ inches in length and diameter of No. 16 Eng. sound; appendix was curved upon itself and adhered under caecum, offending organ removed, etc., as already described, and patient put to bed. For three days, subsequent to operation, patient suffered much pain, restless and what he called "nervous," but no temperature; after a free, copious bowel movement four days after operation, he was placed on full diet. Jan. 15 dressings were removed, with exception of some stitch abscesses everything went along nicely, experienced some difficulty in keeping him in bed; was discharged from hospital Feb. 1. He reported four days later with some discharge exuding from needle punctures on abdominal wall, but they healed up in two or three days.

70 STATE STREET.

Cholecystectomy.

Mayo, of Rochester, Minn. (Jour. of the Am. Med. Ass'n.), lays especial stress on the removal of the mucous membrane of the gall bladder instead of the removal of the entire organ in cases of permanent obstruction of the cystic duct. He argues that the mucous membrane only being at fault, its removal will remedy the condition. This is much more easily and quickly done and is safer than the removal of the entire gall bladder. The continuous secretion of the mucous membrane is the source of the trouble and its removal, leaving only the muscular and peritoneal coats, gives relief. He then quotes statistics showing the frequency of the condition in lesions of the gall bladder and finds that in his own work about 10 per cent of operations for gall-stones are afterward followed by obstruction of the cystic duct. The procedure of removal of the mucous membrane is simple, as it is readily detached from the other coats. As the cystic duct is approached the gall bladder inverts itself, thus rendering the removal of any impacted stone at this site more easy. The peritoneal and muscular coats are sutured to the upper angle of the abdominal wound and drained as in ordinary cholecystotomy. It is as a secondary operation that removal of the mucous membrane is most serviceable. Drainage has failed to cure and the adhesions formed by the previous union of the gall-bladder to the external incision vastly increase the difficulty of complete extirpation. The operation in these cases is best accomplished as follows: An incision is made into the abdominal cavity on the inner median side of the site of the former operation, but these external attachments of the gall-bladder are not severed.

The adhesions are separated to a limited extent on the inner side to enable careful exploration of the ducts to be made. The adhesions in other directions are purposely left and act as a protection to the outer and lower portion of the operative field. After proper gauze protection, the gall-bladder is opened on the inner side in the explored area, about $1\frac{1}{2}$ inches down, and this incision is carried outward toward the external attachments. The

separation of the mucous membrane is begun at the middle and the enucleation carried down to the cystic duct, where it is divided at the point of obstruction. The separation is then proceeded with from within outward until completed. The scar tissue at the place where the gall-bladder is attached to the abdominal wall renders detachment difficult if commenced at that point, but by beginning well below the mucous membrane can be readily separated.

The muscular and peritoneal coats are drained in the usual manner, a piece of sterile gauze being tacked about the inner divided wall by a few catgut sutures, which renders the drainage quite perfect." — M.

A Rapid and Simple Operation for Gall-Stones Found by Exploring the Abdomen in the Course of a Lower Abdominal Operation.

Kelly of Baltimore (Med. News, Dec. 22, 1900), writes on the advisability of examining the gall-bladder for stones, at all abdominal operations, and, further, on the immediate removal of any stones found. His method is simple and effective. Briefly, it is this: After abdominal incision has been made for any operation in the lower abdomen, the surgeon should as routine practice examine all the viscera to determine their condition. This is especially desirable in case of the gall bladder, which can be readily reached by passing the right hand upward along the abdominal wall over the omentum and colon to the lower border of the liver, where the gall bladder is readily found in its notch. Grasping the fundus between the thumb and forefinger existence or absence of stone can be determined readily. In case stone be found his procedure is to crowd it toward the fundus and, retaining grasp of the gall bladder, to push with the fingers thus employed upward against the anterior abdominal wall sufficiently hard to raise a little prominence on the surface.

Then, with the scalpel in the left hand, this prominence is cut down on until the abdominal wall is entirely cut through, when the fundus of the gall bladder will protrude and can be grasped by forceps and incised. The stone at once popping

out. Unless a diseased condition of the gall bladder be present the latter is at once sutured, dropped, and no drainage is used. The intra-abdominal pressure tends to lessen bleeding at the site of the incision. No delay is experienced in removing stone after the opening is made. The great frequency of gall-stone troubles, and the ease of this method, without additional danger to the patient, renders the procedure one of much probable utility. — M.

It is recommended by some that a suprapubic drainage tube be left in the bladder; but this is unnecessary where the bladder is sutured. Whenever the vesical wound is closed, a drainage tube should usually be inserted through a bou-tonniere in the perineum, though a soft catheter per urethram may suffice.

I regret some surgeons yet cling to amputation of the cervix for cancer of that portion of the uterus. Its employment for that purpose is not as encouraging or reasonable as attempts at making an ocean from separate rain drops. It has done so much, too, toward generating opposition to surgical treatment of this disease.

Dr. Givens Sanitarium

At Stamford, Conn., is pleasantly situated on a hill overlooking the city of Stamford and Long Island Sound, and is easy of access from New York and all New England States.

It is a well-known fact that certain climatic conditions are beneficial in certain nervous and mental disorders, and the invigorating (coast) air of this locality, charged with ozone, is a sedative in itself.

During the past year another cottage has been added and the recreation hall has been enlarged, thus improving upon the already excellent accommodations offered for patients desiring special treatment.

All modern means are employed for the treatment of nervous and mental disorders. A separate department is devoted to the treatment of drug habits.

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The Commencement exercises of the Chicago Homeopathic Medical College will be held at 2 p. m., April 23d, at Studebaker Hall. Prof. Wm. G. Willard, M. D., will deliver the doctorate address.

The Illinois Homeopathic Medical Association will meet in Chicago May 7th, 8th and 9th, 1901.

The annual Commencement exercises of the Hahnemann Medical College, Chicago, will be held at Steinway Hall, April 25th, at 2:30 p. m.

The Annual Commencement of Pulte Medical College will be held in the Scottish Rite Cathedral, Tuesday, May 7th. The Annual Pulte Alumni Banquet will follow—and Pulte's Alumni will be guests of the College on that occasion.

The American Institute of Homeopathy will meet at Richfield Springs, N. Y., June 18th, 1901.

Dr. C. E. Kahlke has been elected President of the Homeopathic Medical Society of Chicago.



That all things come to him who hustles.

That an egg is best when fresh, but a boy — O!

That it takes a man with lots of push to shove a wheelbarrow.

That you should never shoot off your mouth unless it is loaded.

That if a baby has the right kind of a mother it won't need "modified milk."

That every little helps — especially a slight shove when you are going down hill.

That it is not wise to say a thing is impossible merely because it is highly improbable.

That there are only two really great disappointments in life — not getting what you want, and getting it.

That there are three kinds of people — those who have the grip, those who have had it, and those who are going to have it.

That you should never fool with a fool.

That it is sheer nonsense to cut your own hair.

That it is the drinking between drinks that upsets a man.

That women think more of flattery than men do, but they believe less of it.

That it is surprising how much trouble some people can stand before it gets to them.

That the men who took Jonah's money were the same ones who threw him overboard.

That when men are as good as their obituaries the recording angel can go on a long vacation.

That a blunder is worse than a crime; there is a remedy for crime, but no prophylactic against blunders.

That if you help a man out of a scrape by lying for him he will always remember you as a very accommodating liar.

MEDICAL ERA

CH. GATCHELL, M. D., EDITOR

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NO. 5

A NEW DOCTRINE IN PHTHISIS.

According to the result of recent investigations it may become necessary for us to revise our knowledge of the respiratory process in tuberculosis. The prevailing doctrine is that in phthisis pulmonalis there is decreased absorption of oxygen by the lungs and a corresponding decreased elimination of carbon dioxide. But the investigations referred to, made by Robin and Binet, of Paris, go to show that the real condition is the exact opposite of the one stated; that is to say, in subjects of tuberculosis there is always greatly increased absorption of oxygen by the lungs, and, at the same time, a greatly increased elimination of carbon dioxide.

Robin and Binet made careful tests in 392 patients suffering with phthisis. As result they claim to have found that in such subjects pulmonary ventilation increases about 110 per cent in the female and 80.5 per cent in the male. Carbon dioxide exhaled by the kilogram of weight and by the minute increases 86 per cent and 64 per cent, respectively, in man and woman; total oxygen consumed to the kilogram-minute increase in the female 100.5 per cent, in the male 70 per cent; total oxygen absorbed by the tissues rises by 162.3 per cent and 94.8 per cent in the female and the male sex.

It was found that this hyper-activity of the pulmonary changes is present both in the acute forms of the disease and in the chronic stages. It is found in the incipient stage, at the height of the dis-

ease, and, in the advanced stages, almost to the moment of death. Moreover, the activity of the process is found to vary with the varying activity of the disease changes; when there is a remission in the severity of the patient's symptoms, the amount of oxygen absorbed decreases.

Another remarkable fact is that the condition of hyperoxygenation accompanies not alone tuberculosis of the lungs, but tuberculosis of other parts, as, for instance, tuberculosis spondylitis, osteitis, osteomyelitis, orchitis, pleuritis and adenitis.

This exaggeration of the respiratory function is not confined to subjects who are already tuberculous, for the condition is found to exist in three-fourths of the offspring of tuberculous parents before any disease has appeared.

It is interesting to note that in diseased conditions in which there is lessened liability to tuberculosis, the respiratory functions are less than normal, as, for instance, in arthritism.

These discoveries not only alter previously conceived notions concerning the respiratory functions in phthisis, but they completely revolutionize all our knowledge on the subject. Instead of deficient oxidation, there is increased oxidation.

The hyperactivity of the respiratory process is accompanied by a more active tissue changes in the body. This accounts for the rapid emaciation, which is so marked a symptom of phthisis. It also makes intelligible the frequent fluc-

tuations in bodily weight occurring in the course of the disease. It is suggested that this exaggerated respiratory process may be regarded as being one of the essential elements of phthisis, and, following from this, the hyperoxidation and demineralization of the tissues may constitute what we have been in the habit of calling the "soil," rendering the subject susceptible to the invasion of the specific bacillus. If this could be established, then a much discussed feature of the most malignant disease to which man is subject, would have a new chapter added to its pathology.

Robin and Binet's discovery would have practical application in the field of diagnosis. Not only would the demonstration of hyperoxidation in a subject be a leading factor in the diagnosis of tuberculosis, but also its existence in others might detect those who are predisposed to the invasion of the disease.

To the subject of treatment, nothing is added. As under the former doctrines, an abundance of fresh air, of good food, and the best hygienic and sanitary surroundings constitute the rational application of remedial measures.

At the recent meeting of the Illinois Homeopathic Medical Association it was provided that one physician from each senatorial district in the State should be added to the Committee on Medical Legislation.

If you have a patient who is likely to have to stay in bed for some time, see that the bed is so turned that he will be able to see the light while lying in the most comfortable position. Sick people naturally turn towards the light, and may be made very uncomfortable by neglect of this simple measure.

ORIGINAL ARTICLES

METHODS OF CHEST GYMNASTICS AND LUNG DEVELOPMENT IN THE TREATMENT OF PHTHISIS PULMONALIS.*

BY CH. GATCHELL, M. D.

CHICAGO.

PROFESSOR OF DISEASES OF THE HEART AND LUNGS
IN THE CHICAGO HOMŒOPATHIC MEDICAL COL-
LEGE.

By modern methods of education deaf-mutes are being taught to convey their thoughts by means of articulate sounds. By refined methods of instruction they are being taught phonation. Thus, in order to communicate with others they are no longer compelled to rely entirely upon sign-language.

Since these unfortunates have thus learned to use their vocal apparatus in articulate speech it has been found that phthisis pulmonalis, a disease to which they were formerly very much disposed, is now much less prevalent among them.

The reason for this beneficial change is clear: Formerly they used only the number of air-cells required for breathing; under the new conditions they use the additional number of cells which articulate speech makes necessary.

The facts here related convey again the long familiar lesson, that the acquirement of phthisis, as we call it—of pulmonary tuberculosis—is favored by respiratory inertia; is prevented by respiratory activity, in the form of increased vital capacity.

It is for this reason that in the treatment of the disease respiratory exercises and lung development become most important factors.

Augmented respiratory capacity means increased supply of oxygen, and increased elimination of carbon-dioxide and other effete matter given off by the lungs. But it means not this alone. Since it is known that the suction action of the lungs in the respiratory process is one of the forces concerned in carrying on the circulation of the blood, it means that this important function is also pro-

*Illinois Homeopathic Medical Association, May, 1901.

moted. In addition to this, the flow of lymph is favored.

But in phthisis the chief object to be accomplished by increased lung capacity is that the system may be supplied with a greater quantity of air, and that there may be increased respiratory surface for the purpose of that interchange of gases which, physiologically, is one of the essential elements of sound health.

Chest development does not necessarily mean lung development. Athletics, as ordinarily practiced in a gymnasium, may develop muscles, without corresponding lung development. The arms and the chest walls may be covered by hypertrophied muscles, without the lungs having undergone a corresponding increase in capacity.

It must not be supposed that an increased supply of oxygen means merely increased aeration of the blood. Oxygen is a form of food, as much so as the proteids or carbo-hydrates. It is food in gaseous form. As one of the first principles of treatment of the phthisical patient is forced feeding by the stomach, so increased respiration is forced feeding by the lungs. Feed to the patient more atmospheric air. This form of food increases the nutrition not alone of the lungs, but also of the entire body.

This is the doctrine as generally accepted to-day. But the recent experiments of Robin and Binet, if confirmed, may for its modification.

These observers found that, notwithstanding the decreased vital capacity in the phthisical subject, the interchange of gases is really much in excess of that in the healthy individual, and that this hyperactivity of the pulmonary functions is a mark of more active tissue-changes.

In order to attain the end indicated in this paper—namely, lung development—many methods and systems have been devised. Each authority seems to have his own. Dennison, of Denver, has one; Zander has another; Ling another. But all have a common object—increased lung capacity.

In order to produce a condition of lung expansion there is no better method than the use of the pneumatic cabinet. This apparatus will cause the air to pene-

trate to every recess of the lung, from apex to base. It opens every air-cell and expands every alveolus. But the apparatus is very expensive and very cumbersome, and for these reasons it is beyond the reach of the ordinary physician. Even when it is in use in the office of the specialist in large cities, there are not many patients who can be given the benefit of it for daily treatment. Consequently the patient must be instructed in some method of chest development of which he can make use, several times daily, at his own home.

The methods recommended by Dennison and others consist of inflation and deflation of the lungs, accompanying the process by various movements of the arms. These methods are devised on correct physiological principles, but it is difficult to induce patients to persist in their practice. They will, after having been urged by the physician, make a beginning, and continue the exercise for a while, but gradually they neglect it, and finally abandon it altogether.

On reflection, it occurred to me that there is good reason why patients neglect this system of exercise. It is because there is little interest excited by the act of standing and swinging one's arms and empty hands in the air. It is a task. It is devoid of inspiration. And the phthisical patient demands inspiration. He cannot be convinced that anything of a serious character affects him. To tell him so is not sufficient to incline him to stand and cut the air with outstretched arms.

This fact makes it necessary to give to the patient's exercise something of an objective character. There must be something for him to see; something for him to grasp; something for him to put into motion.

For this object I have found nothing to answer the purpose so well as a pair of rings suspended by ropes, such as form part of the equipment of every gymnasium.

I instruct the patient to procure a pair of rings, and suspend them by ropes from the roof of a porch or verandah, so that the exercise may be taken in the open air.

The rings are made to be adjusted to

two heights—above the patient's head, as high as the uplifted arms, and again on a level with the shoulders.

In the first position the patient stands when practicing abdominal respiration. In the second position he places himself when practicing costal respiration. In so doing the patient, standing erect and holding to the rings, inhales to his greatest capacity. In this condition, keeping his feet fixed, he leans far forward, the arms, as he does so, sweeping outward and backward. By this exercise all the muscles concerned in the lifting of the ribs and the expansion of the chest, are brought into action, and, the exercise being repeated, permanent chest expansion takes place.

In two important respects this method of exercise has advantages over any other. In the first place, it provides a tangible object for the patient to grasp, and in this respect it is a reminder and an aid. Many a patient who will not stand and go through simple arm exercises, will make use of the suspended rings.

Again, the suspended rings afford a support for the patient while going through his exercise. This I look upon as being a matter of no little importance. One of the cardinal symptoms of phthisis is loss of strength. The patient is wanting in physical vigor. While in this condition it requires considerable exertion for him to stand erect, unsupported, and go through various exercises. At such time the suspended rings act as a support to the body, and enable the patient to accomplish an amount of exercise otherwise impossible of attainment.

I have been asked if the Whiteley exerciser, and other similar apparatus, will not answer the purpose as well. The answer is, No. By the use of the Whiteley all the arm motions can be accomplished, but there is wanting the element of bodily support afforded by the suspended rings.

Another form of exercise that I prescribe for the phthisical patient is described as follows:

The patient encircles his waist with a strap or belt, the two long ends of which cross each other in front, and are grasped by the hands. Now, while standing

erect, the patient exhales, making an effort to drive all air from the lungs. As he does so he draws the belt up tightly about the waist, and so retains it. Now he makes forcible effort to again fill the lungs with air, all the time keeping the belt tightly drawn about the waist. When all the air possible has been inhaled, the glottis is closed and upward pressure is made with the diaphragm. This action forces the air, under increased pressure, into the apices of the lungs. This I have found to be a very efficient method of lung expansion, more especially favoring the apices.

In this connection I will mention Campbell's method of forced inflation of one lung, the lung of the opposite side remaining comparatively quiescent. The patient places one hand against the side of the chest, as high up towards the axilla as possible, and makes an effort to hold that side of the chest still. Now, by making use of the voluntary muscles of respiration of the opposite side, it is found to be possible to inflate one lung while the other lung is comparatively inactive.

There is but one other respiratory exercise that I make use of, remaining to be described. This is an improvised spirometer, which is very inexpensive, and the patient can provide himself with, and use at his own home. The spirometer consists of two large jars, of a capacity of one gallon each, the corks fitted with glass tubing and the two jars connected by rubber tubing. One jar is filled with water to two-thirds of its height. The patient blows into the tube of the jar containing the water, which is driven over into the other jar. By reversing rubber tube, the water may be driven back into the first jar.

This affords a method of lung exercise, and also, by estimating the amount of water driven over from one jar to the other, it indicates the vital capacity. The patient, I find, takes great interest in this method, for it is both objective and it excites his ambition to drive a greater and greater quantity of water over from the one jar to the other from week to week.

In the detailed description that I have here given it may appear that the ap-



paratus is somewhat complicated. But in reality it is not so. It is, indeed, exceedingly simple—merely two suspended rings for the one form of exercise, and a strap for the other. By these may be accomplished all that is afforded by the most elaborate apparatus.

While giving attention to methods of lung gymnastics, the fact must not be lost sight of that all such exercise must be taken in the open air. The consumptive patient wants air, but it must be fresh air, pure air, air that has been unconfined.

100 STATE STREET.

LEUKEMIA.*

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CHICAGO.

The trend of recent hematological literature again gives evidence of a determination to place leukemia among the infectious diseases.

While this is a rational procedure, inasmuch as it stimulates investigation along a line possibly prolific of future results, yet absolutely to accept the infectious origin on the basis now offered by the promoters points strongly to what might be termed scientific coercion. The seemingly plausible bacteriological deductions, when subjected to the properly limited clinical analysis, present unrivalled material for the study of the art of hedging.

It would seem that this condition of affairs results from a disinclination to eliminate from the problem the results obtained from cultures made at the autopsies.

Investigators have found micro-organisms of one sort or another in the blood or tissues after death, and have been inclined to attach importance to their finds, in spite of the warnings of Metchnikoff years ago, who even then attributed the micro-organisms in question to terminal infection.

The abundant culture-growths, with

*Homeopathic Medical Society of Chicago.

great variety of colonization, always obtainable from the viscera even with perfect technique, is in itself significant of the wholesale invasion by bacteria incident to the moribund state.

The action of Lowit was commendable when he alienated himself from experimental work on the cadavers and directed his efforts to living tissues.

It must be admitted that at the present time it is difficult to connect Lowit's description of the ameba he found with any known morphological constituent of the blood. I have been unable to secure an original slide, showing the specific bodies he describes, and equally unsuccessful in endeavoring to demonstrate the parasite clinically. My attempts to differentiate with O₃ Hcl alcohol has failed in every instance in which I followed Lowit's technique, which is to decolorize excessively; thus destroying all the bodies, except the basophile granules and ameboid parasite in question.

Dock, of Ann Arbor, says, "My attempts to demonstrate the protozoa described by Lowit, as occurring in leukemic blood, have so far been negative. He does not refer to any difficulty with technique which others have complained of.

In great contrast, yet tending to support the infectious origin, are the deductions of Ebstein and Frankel, who made particular study of the clinical course of the disease. Their observations, however, have been largely limited to the acute, or so-called lymphatic type, which occurs frequently on the Continent. In upholding the infectious nature of the disease they conclude by citing the acute infection-like onset, accompanied by temperature, emaciation, glandular adenitis in varying degree, with splenic enlargement, the patient succumbing in a few weeks.

The rarity of the acute type in this country undoubtedly explains the popularity of the neoplastic theory. With a few American investigators, whose experience has been limited to the chronic manifestations, in the latter the apparently causeless onset, followed by chronic progressive anemia and splenic hypertrophy; later the wide and marked secondary deposits; closely allied to the

process occurring in lympho-sarcoma, and Hodgkins disease, seems by the promoters to have some weight in establishing the true nature of the trouble.

A few surprising facts come to light in studying the classification of leukemia. Thus, Ehrlich groups the leucocytes according to the size, solubility and staining of the granules contained in the cytoplasm of the cell, and this classification is frequently used in pathological literature on the blood and practically constitutes the basis for the classification of the lukemias. Thus the lymphocytic myelocytic, or spleno-myelogenous variety, more recently the leucocytic, polymorphocyte leukemia, and other numerous designations, all depending on leucocyte morphology.

This is absolutely unsatisfactory to any careful investigator, who must be cognizant of the fact that all physiologists without exception believe that the different kinds of white cells, as described by Ehrlich, are only different stages of development of the same cell. Furthermore, the leucocytes are so cosmopolitan in their habits that we can hardly call them blood-cells at all; it is better to think of blood leucocytes, gland leucocytes, and marrow leucocytes, in view of their wide distribution and apparent diversity of function. With special reference to the myelocyte, it must be remembered that histologically the granules are the same as the adult leucocyte.

Taking this view as worthy of consideration, of what particular significance is the designation lymphatic, as applied to a form of leukemia, running an acute course and characterized by an excess of lymphocytes in the blood? There is nothing peculiar about the cells, which differ in no respect from those found in normal blood. Truly the distinction between leukemia and leucocytosis is clear; but apply this to acute leukemia and what inference can you draw, any more than that we have to deal with a polymorphocyte on the one hand and those of a mono-nuclear character on the other?

Lymphocytosis is characteristic of the blood in rachitis, yet we do not presume to call the disease lymphatic rickets, although the majority of cases exhibits dif-

fuse glandular adenitis. The same applies to syphilis with general glandular enlargement and high lymphocyte-count, yet no syphilographer has announced his intention of terming this condition lymphatic syphilis.

I do not wish to avoid applying the above to the chronic or spleno-myelogenous variety, to which my experience clinically has been chiefly limited, in a given time having seen but one case of the acute type, while observing eight of the chronic.

Agreeing that the myelocyte is a blood constituent only under pathological conditions, it is also peculiar to other diseases than leukemia. Thus myelocytæmia, in varying degree, occurs in burns, in osteomyelitis, osteal carcinoma, osteal sarcoma, malaria with severe secondary anemia, cystitis, chronic starvation, septicæmia, bone tuberculosis, rachitis, Addison's and Hodgkin's disease. Also I have detected a relatively high myelocyte count in two cases of pernicious anæmia. The latter reminds us of Cabot's interesting case of primary anemia, the differential count showing 115,000 myelocytes to the cubic millimeter.

In the light of recent developments the coveted idea that the blood picture of chronic leukemia is absolutely characteristic and peculiar to no other disease, has to a considerable extent undergone modification. In this I may be permitted to quote Von Jaschk, who in a recent contribution on infantile leukemia states that often the greatest difficulty arises in differentiating between blood from the latter affection and blood from pernicious anemia. In conclusion he adds that the blood showing the highest myelocyte count would probably be leukemic.

Unfortunately we have no method of determining just how numerous the cells in question must be in order to constitute a leukemic condition. I offer this analysis as a basis for discontinuing morphological methods, which alone are insufficient to solve the leukemic problem. The impetus given by Ehrlich's work has been so tremendous that for years important clinical and pathological facts have been left in the background, and

chemical studies in reference to the disease entirely ignored.

Since the advent of the morphological method of studying leukemia the relation between the latter and Hodgkin's disease has ceased to be of interest to clinicians. However, it is still of cardinal importance to remember that pathologically speaking the two affections are identical; especially is this augmented by careful study of the spleen, which is essentially a lymphatic gland. When the spleen is small in man or in animals the lymphatic glands are large, and vice versa. On the other hand, with hypertrophy of the spleen we observe changes in the bones identical with those occurring in the leukemia's and in Hodgkin's disease, indicating functionally the relationship between the two. Indeed, recent observations render it probable that the spleen produces red blood corpuscles as well as the white cells, and by analogy being as active a hematopoietic factor as the bone marrow.

Billings, Jr., maintains that slight enlargement of the spleen is common enough in Hodgkin's disease, but never becomes enlarged enough to cause special symptoms by itself, as it does by anatomical interference in leukemia.

Contrary to this view, the spleen, from my case of Hodgkin's disease, weighed 1700 grams, which is almost as large as the spleen from Seppy's case of leukemia, which weighed 2100 grams. In a letter from Billings, Jr., in reference to my case, he stated the likelihood of leukemic changes being engrafted on the primary disorder; but the slides failed to show any blood variation from the normal. Histologically the spleen showed slight increase of reticulum, and diffuse areas of sclerosis, and marked increase of lymphoid elements.

Nucleated blood corpuscles were found in the marrow, but not in great number. The cervical, axillary and inguinal glands showed hyperplasia of connective tissue and lymphoidal elements. These changes from my case of Hodgkin's disease are practically those found in leukemic viscera.

As to etiology, I can offer nothing of particular import. In my series of

cases malaria seemingly was present in early life, but as the patients were largely from non-malarial districts and it being impossible to verify the diagnosis, the relationship of the chills to plasmodium infection remains undetermined. I am of the opinion that the study of a few cases in their incipency would connect the chills directly with the leukemic condition; particularly in view of the fact that quinine, which was usually resorted to, failed to give the therapeutic result. The condition after extending over months of time entirely disappeared, without secondary anemia or cachexia. Were the chills and fever malarial it would be reasonable to expect secondary anemia of considerable extent within a comparatively limited time, while we know that even in advanced cases of leukemia secondary anemia of sufficient extent to give a cachetic appearance is rare. As with other writers I have noted the prevalence of leukemia among the Russians. Of three cases observed at Cook County Hospital, two were native Russians, the remaining one of Russian descent.

Like all relatively rare diseases leukemia goes long unrecognized, a blood examination being made only when gross physical findings suggest the condition present. Very rarely cases in their incipency are discovered by clinicians who make blood examinations as a routine in physical diagnosis. Cabot cites (*International Text-Book of Surgery*) an instance where a surgeon cut down on a liver to make it sure it was leukemia. This was, of course, absolutely inexcusable, as a blood examination would render a positive diagnosis.

The confusion of leucocytosis with leukemia is of frequent occurrence; the distinction lies not in the number of leucocytes, nor in the duration of the increase, since leucocytosis frequently shows a higher count than leukemia.

In leukemia, with only moderate enlargement of the lymph-nodes, a blood examination is necessary to exclude tubercular adenitis. Both syphilis and tuberculosis, with high lymphocyte count, have been mistaken for leukemia. No

doubt this is the origin of many so-called chronic lymphatic leukemias.

Only recently I was surprised by getting a typical tubercular reaction from a patient showing cervical and axillary adenitis with a very high lymphocyte percentage, the latter leading to an erroneous diagnosis of leukemia. I am also cognizant of a case which was exhibited at the County Hospital clinics as lymphatic leukemia, in which the tubercle bacilli were found in great numbers in the sputum, after the patient was taken back to the ward. This, of course, altered the leukemic condition to such an extent that the patient was not "at home" to numerous blood experts, who called in to look the case over more thoroughly.

When the splenic hypertrophy is sufficient for palpation low in the pelvis, the tumor mass may be mistaken for ovarian (tumor) cyst, hydro-nephrosis, floating kidney, tumor of the kidney of various kinds, splenic tuberculosis, and floating spleen. The height to which the splenic dullness extends upward in the mid-axillary, post-axillary and scapular lines may give the impression of fluid within the pleura. Thus splenic puncture has often resulted from tapping in the fifth and sixth, sixth and seventh, or seventh and eighth interspaces, in the mid-axillary and post-axillary lines. The presence of edema and cachexia in advanced cases offers a field for the diagnosis of tuberculosis, chronic paryenchymatous and interstitial nephritis, primary anemia, and splenic anemia, with special reference to symptoms. Much error arises from the fact that patients do not show pallor or cachexia until extremely advanced in the disease. Many seem to think there is something characteristic about the appearance of a leukemic patient. I have often been told, in answer as to whether leukemia had been suspected, that it had not because the patient was not pale. A reduction of hemoglobin to fifty per cent is compatible with a good color in this disease until extremely advanced in leucocytic infiltrations of the viscera.

While text-book writers put the average duration of the chronic form at four

years, hematologists of late consider the average duration as much longer. This I can testify to in a practical way, having under observation at the present time five cases, of which three have been leukemic for six years, one five years, and the remaining case twelve years. Owing to the long duration of the disease in the latter instance I made special endeavor to secure reliable data concerning the patient's condition before admission to the hospital. The patient was aged 26 years; occupation, cook; family history, negative; personal history, usual diseases of childhood. Since 14 years of age has had recurrent attacks of acute paroxysmal pain, referable to the splenic region. Duration of attacks from several hours to a week; in frequency occurring almost every month. During the first part of the attack he would be compelled to assume the recumbent posture, but was up and around as the pain assumed a more sub-acute character and finally disappeared. He thinks he had fever in varying degree of intensity accompanying the pain from the onset; is positive that the severe aching in the long bones which is now present has been a constant feature for years. When 18 years of age he observed the region directly below the costal arch, becoming more prominent as compared with the right side. Six years ago, while cooking on a dining-car, he suffered one of the usual attacks, but with increasing prostration and considerable dyspnea. Through the influence of friends he was admitted to the Battle Creek Sanitarium in October, 1894, in the condition above stated.

Dr. Huling of that institution very kindly furnished me with the blood analysis, made shortly after admission, showing

3,300,000 reds,
950,000 white to c. m.,
Differential count of white cells,
Myelocytes, 35 per cent.
Polymorphonucleocytes, 33 per cent,
Lymphocytes, large and small, 24 per cent,
Eosinophiles, 8 per cent,
Haemoglobin, 54 per cent.
Diagnosis, spleno-myelogenous leukemia.

Doctor Huling considered the condition as an acute aggravation, occurring in the course of a chronic leukemia. During the stay in the Sanitarium the dyspnea increased in severity; and the edema about the ankles became marked; partial failure of vision suggesting leucocytic infiltration of the retina. The treatment consisted of absolute rest in bed, generous diet and hydro-therapeutic measures; but no internal medication. Under this regime he improved slowly and at the end of three months came to Chicago, resuming his occupation as a cook. He now could feel a mass which seemed to fill up his entire left side, as he expressed it, and with the exception of a feeling of weight and occasional pain in this region, suffered no inconvenience until (the spring of '99) last spring, when he was admitted to my service at the Cook County Hospital. Physical examination on admission showed enormous enlargement of the spleen, with slight increase of hepatic dullness. The lower border of the spleen was on a level with the crest of the ileum. There was no acites. Over the area of splenic dullness a dry friction rub could be detected. Leukemic changes were present in the retina. Dyspnea and pain in the long bones were marked. Blood examination showed:—

Reds, 3,000,000,
Whites, 870,000 to c. m.
Differential count:
Myelocytes, 40 per cent,
Polymorphonucleocytes, 30 per cent,
Lymphocytes, large and small, 25 per cent,
Eosinophiles, 5 per cent,
Hemoglobin, 45 per cent, by specific gravity method.

A comparison of this count with that made in '94 by Dr. Huling shows a five per cent increase in myelocytes, indicating more extensive changes in the bone marrow. I am confident that the pain referred to in the splenic region since 14 years of age was due to peri-splenitis, incident to gradual hypertrophic changes in that organ. These observations to my mind decide the question as to whether the splenic hypertrophy is primary and causes the blood condition, or whether

the alterations in the blood are primary. The general evidence goes to show that splenic hypertrophy occurs before myelocytomia. This is partially borne out in this case, the myelocyte count becoming higher coincident with splenic hypertrophy. The red blood count improved and considerable decrease in myelocytes took place under absolute rest in bed and the exhibition of Fowler's solution in 5 m. doses three times a day. Particular care was given the mouth and gastro-intestinal tract. For the former antiseptic mouth washes and the frequent administration of salol and bismuth salicylate apparently relieved the intestinal distention, which at times was an aggravating symptom. After two months in the hospital the edema and dyspnea entirely disappeared. Blood examination at this time showing:—

Red, 4,000,000,
Whites, 116,000 per cent c. m.
Differential count:
Myelocytes, 20 per cent,
Polymorphonuclear lymphocytes, large and small, 15 per cent,
Eosinophiles, 5 per cent,
Haemoglobin by Gowers' instrument, 60 per cent,
Haemoglobin by specific gravity, 63 per cent.

This count showed a marked reduction in the white cell count and the qualitative analysis, indicating less myelocytes; patient felt comparatively well, and left the hospital, promising to inform me of his condition from time to time, which he has faithfully done. Since his residence in Denver he has felt better than at any time for years. Dr. Holmes of that city became interested in the cases and writes me that a short stay in a high altitude brings the patient's red blood count up almost to normal. I am particularly anxious to investigate the effect of altitude in leukemia, as in other blood disorders decided benefit has resulted from seeking high elevations.

As to treatment I do not believe any medicine now employed influences the course of the disease to any extent, as sometimes the most hopeless cases make rapid improvement without treatment. However, Arsenic in various forms may

be tried. The Liq. Potassa arsenitis is largely used by some clinicians. Arsenic in the form of the Arsenious acid may be given. Of late Cacodylic acid has been used extensively, but without apparent result. Iron in any form is useless. I believe that any analogy may be drawn between this disease and exophthalmic goitre, the spleen and bone marrow having a perverted function and form toxic substances which cause nutritional disturbances. That the bone marrow is largely involved, is shown by the excision of leukemic spleen; after which the disease continues unabated. The hope lies in a suitable extract from bone marrow or spleen.

4300 COTTAGE GROVE AVENUE.

ACNE INDURATA.*

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LEGE.

In submitting this paper, I only wish to call attention to one of the classes of acne, viz., acne indurata, an affection of the sebaceous glands, in which they become enlarged and inflamed, their ducts being closed by the epidermis having extended over them, thus permitting no escape of the contents or secretions of the glands. As a result there develops a small round nodule about the size of a pin's head, readily outlined by pressure, lying beneath the epidermis. The color of the integument above, and around the nodule, is white, being anemic, the result of pressure. As these nodules increase in size the surrounding tissues become irritated, an inflammation is started, which is soon followed by suppuration, which later destroys the peri-glandular tissue, thus forming a minute abscess, with a core or sebaceous plug in its center. The integument about the lesion now shows a dark red or purple indurated discoloration. Less resistance being offered by the tissues beneath the skin, than by the epidermis, the abscess burrows downward to the cellular tis-

sue. In size these indurations vary from a small pea to a hazel-nut. They are painful and the disfigurement is very distressing to the patient, as they always appear upon the face and shoulders, the former preferably.

These small abscesses seldom rupture, therefore, if left to themselves, reabsorption of their contents takes place, leaving a dull red spot as a mark to their location, and often, where considerable tissue was involved, a depression also exists.

The above condition begins at puberty and may extend over a period of years. As the etiology is obscure, a thorough investigation of each patient's condition should be made, to ascertain which of the anatomical elements are out of order, and such methods and remedies as are necessary used to correct these disorders.

Look well to the hygienic surroundings of the patient, prescribe a plain, nutritious diet (here let me state that too much sugar, pastry, rich dishes and fancy cooking are used in feeding the average family to-day).

Protect the face against irritating winds, by the use of a good veil, and prohibit face powders and cosmetics; teach the patients to cleanse the face with a pure soap, and clean water, after which be sure that the soap suds are thoroughly washed off with fresh, clear water.

When there is a seborrhoeic condition present, accompanied by the nodule formation, the face should be thoroughly washed with soap, and hot water, friction being applied by means of a flannel cloth; in this way, if the epidermic cells are not too thick a separation will take place, and the applied heat will melt the serum sufficient to permit its being expelled from the gland, and its obstructed duct; after which the application of a local wash of 1-5000 bichloride of mercury will assist in contracting the glandular structure, likewise the tannate of glycerine will render the same service.

The above treatment failing the little nodules should be opened with a fine

*Homeopathic Medical Society of Chicago, April, 1901.

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dermal lance, and their contents expelled, by gentle pressure produced by the thumbs of the operator's hands or the dermal curet (the surface of the skin having previously been rendered aseptic), after which either of the above applications may be used with benefit. This early operation upon the plugged glands will prevent suppuration and unsightly scars later on.

When suppuration has taken place, and the patient is suffering pain from the abscesses and mortification from the appearance, the lesions must all be opened and the contents all evacuated. Should the selaceous plug still remain, the operation would have to be repeated, in from twenty-four to forty-eight hours. Treat the operated area of the skin antiseptically. To assist the bleaching of the scars the following preparation has served well :

Bichloride mercury, gr. i.

Zinc chloride, gr. i.

Glycerin, dr. s.

Aqua Dist, oz. iv.

Salves and local washes will not remove the contents of the acne lesion, and when absorption takes place it is slow, hence these lesions should all be treated surgically and their existing cause removed.

When pus is allowed to remain injection of other glands takes place through the lymph spaces which are abundant in the integument.

900 MARSHALL FIELD BUILDING.

Local anesthesia, a few moments for excision and suturing, and two or three painless days for healing seem so insignificant a combination that it is a source of surprise that fleshy warts, sebaceous cysts, and epitheliomatous ulcers are so frequently permitted to remain as facial blemishes.

Femoral hernia is usually constricted at the upper edge of the canal, due most frequently to Gimbernat's ligament, so that our incision should be made above the hernia, and I believe that the best exposure can be made by following the line of Poupart's ligament.—A. McLaren.

Acute Laryngitis.

A most important part of the treatment of acute laryngitis is rest, especially of the inflamed larynx. All unnecessary talking should be avoided and no effort made to talk above a whisper. In the case of singers, orators and actors, where it is of the utmost importance that a normal voice should be regained as speedily as possible, absolute rest in bed in a warm room will do much to hasten the desired result.

The application of cold or heat to the skin over the larynx gives decided relief in the more severe cases. As to the selection of heat or cold the sensations of the patient would seem to be the best guide. In my experience, heat is usually the more grateful. Cold may be applied by means of a Leiter coil or a small ice-bag or a napkin wrung out of ice-water and applied to the neck of the larynx. It should be changed sufficiently often to maintain the degree of cold desired.

Heat may be utilized by applying a Leiter coil upon the skin over the larynx in the usual manner and allowing hot water to flow through the coil. A folded napkin should be placed under the coil to protect the skin, and the temperature of the water should be as high as can comfortably be borne by the patient.

Of the local remedies, steam or rather hot, watery vapor gives in most cases very satisfactory results. A teaspoonful of tincture of benzoin should be placed in a quart bowl or pitcher partly filled with hot water and the fumes inhaled through the apex of a paper funnel placed over it.

New Form of Administering Mercury in Syphilis.

Winfield Ayres states that mercuriol is superior even to mercuric chloride in controlling the symptoms of syphilis, and this is proved, in his opinion, by the trial he instituted. Like all preparations given internally mercuriol has very little effect on the chancre; still, it has hastened the healing slightly. It seems to be much

more efficient in controlling skin eruptions than mucous eruptions.

Two further remarks may here be made: first, that the number of patients who have returned for treatment is unusually large for dispensary work; and, secondly, that of twenty-five patients whose cases he reported, none required dition of potassium iodide had no effect in trol the secondaries. In one case the addition of potassium iodide had no effect in controlling the pains. In another case the eruption was one of tertiary variety — that is, marked thickening of the skin.

It has seemed to the writer in the short time that he has used mercuriol (1) that it causes less disturbance of the gastrointestinal tract than any other preparation of mercury used internally; (2) that it controls skin eruptions and pains much better than any other preparation, which it controls mucous eruptions as well as any other, and has equally good effect on the chancre; and (3) it is an advantage that it can be taken in pill form. These three points make the preparation one of great value. — *Phil. Med. Journal.*

A Method of Giving Castor Oil.

Fill the mouth with milk and hold it there; dip up a tablespoonful of milk and pour into this spoon — already full of milk — about a teaspoonful of oil; whether cod-liver oil or castor-oil, you will see that it displaces milk to the extent of its bulk, as any other liquid would do, but the globules of either of these oils, being different from the globules in milk, do not mix with the latter, and the oil will be in a round ball, not touching the spoon. As you swallow the milk that has been held in the mouth, take the spoonful of milk in the mouth, and at once begin to drink milk from a cup at hand. Washburn has never yet found the person who, if the procedure was carried through in this manner, could tell whether he has taken castor-oil, or cod-liver oil, or taken none at all. There is absolutely no contact with the mouth or throat of any particle of the oil, nor can it be smelled on the spoon. All this implies taking immediately, but not with undue haste.

The oils as well as the milk must be

cold, and the colder the better. The quantity can be increased by degrees as the stomach will stand the oil desired, but if a large dose of castor-oil is desired, it can be better given by repeating the procedure than by attempting to swallow too much at one time.

This procedure has given Washburn and so many of his patients, especially parents when administering oils to children, so much comfort that he repeats what he wrote of it over fifteen years ago, hoping others who do not seem to have heard of it in detail may also find relief from the nauseous taste that so many dread. — *Jour. Am. Med. Assoc.*

Applications to the Eyes.

The cold cloths should be large enough to cover the lids and thick enough to retain the cold for a few seconds. Eight or ten such cloths are laid on a block of ice in a basin by the bedside and are placed on the lids one after the other, being changed so rapidly as to keep as much cold to the eye as possible. They must be frequently destroyed if there is much discharge, and new ones made. The action of the cold is to reduce the swelling of the lids and conjunctiva; it is especially important if much chemosis is present. If the cornea becomes infected the iced cloths must be stopped, as the cold depresses the cornea and tends to increase the ulceration. Hot applications are usually substituted under these circumstances. Pads of cotton saturated with very hot water are applied to the lids and rapidly changed for fifteen minutes every three hours. This stimulates the cornea and also decreases the swelling of the lids, though for the latter it is not so effective as cold. The pupil is usually dilated with atrophine as soon as corneal involvement is noted. — *Trained Nurse.*

If you feel uncertain about a violent colicky pain, which simulates peritonitis, remember that in the latter disease it is quite impossible to move the abdominal walls over the intestinal mass, for the whole cavity is in a condition similar to that which exists in a badly inflamed joint.

BOOKS

THE MEDICAL EXAMINATION FOR Life Insurance. By Charles Lyman Greene, M. D., Clinical Professor of Medicine and Physical Diagnosis in the University of Minnesota. Published by P. Blackiston's Son & Co., Philadelphia. 1900. (Cloth, \$4.)

The profession has long needed a textbook on the subject of life-insurance examination, and it is very fortunate in now having one of such high order. It shows a critical knowledge of the subject, and much original work. The section on the examination of the chest is especially well arranged, and the illustrations are original and extremely useful.

Every physician who has anything to do in the examination of candidates for life-insurance should make use of this book. It will redound to the benefits of the insurance company, and make of the examiner a valuable man.

A TREATISE ON APPENDICITIS. BY George Ryerson Fowler, M. D. Second Edition, Revised and Enlarged. Philadelphia and London. J. B. Lippincott Company, 1900.

We remember with pleasure the satisfaction experienced in reading the first edition of this scholarly monograph in 1894. The book before us has been thoroughly revised and embodies the results of seven years' additional study and observation. The author's teaching as regards operative interference in this treacherous disease is sound, and an entirely new chapter is devoted to the differential diagnosis of appendicitis from diseases presenting similar symptoms. This chapter is of great value to any one having to do with this class of cases. The indications for operation and the technic of operation are clearly set forth, and there is also a chapter upon the non-operative treatment. We can commend this book to our readers without reservation.

A.

PROGRESSIVE MEDICINE, VOL. I., 1901.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 430 pages, 11 illustrations. Per annum, in four cloth-bound volumes, \$10.00. Lea Brothers & Co., Philadelphia and New York.

This quarterly review is improved each year of its publication. In the present volume Dr. Da Costa gives a chapter on Surgery of the Head, Neck and Chest. Dr. Frederick A. Packard has devoted much space to a careful consideration of the important subject of typhoid fever. The Disorders of Childhood have been dealt with by Dr. Floyd M. Crandall. Laryngology, Rhinology and Otology are presented by able writers. The book contains 440 pages, and is very thoroughly indexed. The series of four volumes, of which this is the first, will form a very complete record of the year's work in medicine.

INTERNATIONAL CLINICS; A QUARTERLY OF Clinical Lectures and Especially Prepared Articles on Medicine, Surgery, etc. By Leading Members of the Medical Profession. Edited by Henry W. Cattell, A. M., M. D. Vol. I. Eleventh Series, 1901. Philadelphia: J. B. Lippincott Co. 1901. (\$2.00.)

The first volume of the eleventh series of International Clinics shows that it is possible to improve upon that which had already been brought to a high standard of excellence. The book opens with a chapter on "Notes on New Remedies," by A. A. Stevens, M. D. In these pages are given the latest on such new remedies as urotropin, methylene blue, enchinin, chloretone, and others with which we are familiar. In the back of the book is a section on "Progress of Medicine," by N. J. Blackwood, M. D. It covers the year 1900.

The work is handsomely printed and well bound; it is freely illustrated.

MANUAL OF HOMEOPATHIC MATERIA Medica. By J. C. Fahnestock, A. M., M. D. Piqua, O., 1901.

This is a neat little volume of 264 pages, in which are given the characteristics of the leading remedies in the homeopathic materia medica. The name of the author, who is a close student of the subject, is a guarantee that the selection of symptoms has been well made. The work includes *Ceanothus Assr.*, a drug to which Dr. Fahnestock has given especial attention. We congratulate the talented author upon his entry into the field of standard medical literature.

SELF-EXAMINATION FOR MEDICAL Students. P. Blakiston's Son & Co.

This useful brochure contains thirty-five hundred questions, on all topics of medicine. The student who is preparing for examination will find it to be a great aid.

Respecting books we are pleased to announce "in press" Jousset's Practice of Medicine. Jousset is the foremost consulting physician of France, was president of this year's International Congress. The book embodies results of forty and more years' experience. Every page breathes forth his personality. He not only gives the remedy used and the potency, but his why and wherefore. He has written forcefully and of his vast personal experience. This is the third edition; the first two were in French and the translation is from author's unpublished manuscript, specially re-written for the translator, Dr. Arsachgouni. Those who have looked over the manuscript are enthusiastic in its praise.

Clinical Experience with Adrenalin.*

The aqueous extract of supra-renal gland is perhaps the best culture medium

*Emil Mayer, M. D., Surgeon, New York Eye and Ear Infirmary, Throat Department; Fellow American Laryngological Association, and of the New York Academy of Medicine, New York. Abstract from original paper, in the Philadelphia Medical Journal, April 27, 1901.

known. Its instability, the involved method of preparation, its unsightliness, and the inexactitude of its various strengths tend to make us welcome a preparation that is exact, stable, and, above all, clean. Dr. Jokichi Takamine undertook the task of isolating the active principle of the supra-renal gland. He obtained a substance in stable and pure crystalline form, which raises the blood pressure, and which he named "Adrenalin."

The author has used solutions of Adrenalin Chloride, 1 to 1,000, 1 to 5,000, and 1 to 10,000; his cases were all rhinological. Blanching of tissues followed the application of the strongest of these solutions in a few seconds, and was very thorough. In no instance was there any constitutional disturbance. He has employed no supra-renal extract since, for any purpose whatever.

The effect of the solutions was not altered by their change to a pink color; they were used for six weeks. Subsequently a small amount of chloretone was added to the fresh solutions and now there is but slight change of color and no floccules appear.

Thirty-five cases are reported in tabulated form, showing that the usual effect of the aqueous extract of the supra-renal gland was obtained. A few operative cases bled freely, but in every instance the hemorrhage was promptly checked by a second application of Adrenalin. The Adrenalin was used not only as a hemostatic, but for the relief of nasal congestion, as a diagnostic aid, and for the continuous treatment of acute inflammatory affections of the accessory sinuses.

The author arrives at the following conclusions:

1. Adrenalin Solutions supply every indication for which the aqueous extract has been used.
2. They are sterile.
3. They keep indefinitely.
4. Solutions 1 to 1,000 are strong enough for operative work, and 1 to 5,000 and 1 to 10,000 for local medication.
5. They may be used with safety.

SURGICAL ERA

CHAS. ADAMS, M. D., EDITOR

CHICAGO, MAY, 1901

THE DISINFECTION OF WOUNDS WITH PURE CARBOLIC ACID.

In the Philadelphia Medical Journal, No. 20, 1901, appears an article by Prof. Von Bruns, of Tuebingen, Germany. There is abundant clinical evidence of the value of the pure carbolic acid used as a disinfectant of wounds in the manner described in the article, which we reproduce entire:

Although our methods for rendering operative wounds aseptic have been productive of a certain definite result, there is, nevertheless, still more to be desired in the treatment of infected wounds. The times during which all good results were expected from antiseptic irrigations, are passed. Antiseptics came into discredit because the danger of poisoning accompanied their employment, as carbolic acid and sublimate, and also because, when coming in contact with the albuminous secretions and tissues of the body, they lost their efficiency, like corrosive sublimate, etc. We were soon convinced that no disinfection could render a septic wound aseptic, and even ascertained, by comparing the efficiency of the aseptic and antiseptic treatment of infected wounds, that neither was superior to the other.

The principal value, therefore, has been ascribed to the physical action of the means at our disposal: free incision exposes the focus of suppuration, the infectious wound secretion is washed off, moist dressings are applied for the purpose of absorbing the secretion, and we attempt to obviate the inspissation and retention of the secretion by frequently changing the dressings. In many in-

stances antiseptics is entirely desisted from and only sterile salt solution employed for irrigation and moistening the dressings.

But I believe we should not desist from chemical disinfection, but look for a procedure which is germicidal, without causing injury. I have recently again conducted experiments in this direction, which promise favorable results, although the latter are not yet conclusive. This consists in disinfection with pure carbolic acid.

This may cause considerable hesitation, especially when the times of Lister's carbolic acid antiseptics are thought of, and also the innumerable cases of eczema, intoxication, marasmus, and gangrene, caused by carbolic acid. All this was attributed to the employment of dilute solutions, and consequently one should suppose that the concentrated solution, 96 per cent carbolic acid, would act even worse. This apprehension is at first disproved by Levis' method of treating hydrocele with injections of pure carbolic acid into the sac of the delicate tunica of the testicle. The procedure never causes intoxication, and is characterized by the slight reaction and the absolute painlessness after its employment. Recently Phelps has treated wounds with pure carbolic acid, after opening tuberculous abscesses and joints, especially the hip joint, and has recommended this method on account of the brilliant results which he has obtained. The joint is opened freely, scraped out or resected, and then filled with pure carbolic acid, which after one minute is washed out with absolute alcohol. Phelps here con-

siders the alcohol as an antidote against the corrosive action of the carbolic acid.

By these procedures the applicability of pure carbolic acid to wounds is demonstrated; but before we proceeded with the practical application of the method, certain questions had to be answered in an experimental manner. The experiments were conducted by Dr. Honsall, who will report the results. I will but state, that carbolic acid in concentrated solution is relatively less toxic than when diluted, that its penetrability during its brief influence is but slight, and that the bactericidal action of pure carbolic acid surpasses that of sublimate in albuminous compounds.

In view of these assumptions the procedure of Phelps seems to me to be of considerable value in septic wounds. We have employed it in more than eighty cases of infected wounds, plegmons, suppuration of joints, etc. After incision, and subsequent curetting or excision of the wound, the surrounding skin is protected against the excess of carbolic acid, by wetting it with absolute alcohol; the wound is then thoroughly swabbed with a gauze sponge previously immersed in pure carbolic acid. The amount of carbolic acid employed depends upon the size of the wound, but more than 2-6 gr. was not even used in the largest wound, therefore, not more than is injected in a hydrocele sac and left there with impunity.

Not only is this cauterization with carbolic acid not particularly painful, so that it may be performed without anesthesia, but the subsequent pain after fresh incisions is also remarkably slight. Particularly remarkable is the small amount of secretion after the first dressing, so that the latter may remain from 2-4 days in cases where otherwise the dressings would have had to be regularly changed

after 12-24 hours. For example, in a case of resection of the hip joint, performed on account of grave, acute puerperal suppuration, the first dressing was allowed to remain four days, during which the temperature was nearly normal.

From this alone it follows that carbolic acid applied but once markedly influences the condition of septic wounds. The course, as a rule, is simpler and less interrupted than is ordinarily observed. Local injury was never noticed, neither a trace of toxic symptoms, and not in a single instance, carboloria.

The result obtained obviously depends upon the fact that carbolic acid belongs to the few antiseptics, whose germicidal power is not weakened by the secretions and tissues of the body. Pure carbolic acid destroys with certainty the bacteria on the surface, and also those in the most superficial layers of the wound. In addition, the superficial sloughing brings about a reaction in the deeper layers, which assists in the demarcation and desquamation of the septicly infiltrated areas, thus assisting, as it were, in the cleansing process of the wound.

I do not hesitate to recommend the application of pure carbolic acid in small quantities and for one minute, followed by immediate irrigation with absolute alcohol, as a remedy that forms a valuable adjunct to our mechanical procedures in infected wounds. It would be a special providence if that remedy which was the foundation of the whole antiseptic era, and which since then has again been generally discarded, would be called upon to serve us anew in the battle against wound-infection.

It has been for years a matter of observation that pure carbolic acid is not absorbed to any extent by a raw or granulating surface, the reason being that the acid forms, immediately on contact with the tissues, an impermeable and insoluble barrier between the non-penetrated tissues and the free acid within a cavity or upon the surface of a wound.

**SOME ITEMS OF INTEREST FROM THE
ANNUAL MEETING OF THE AMERICAN
SURGICAL ASSOCIATION, MAY
7th, 8th, 9th.**

(N. Y. MEDICAL RECORD.)

**Brief Consideration of the Cases of Cancer
of the Breast Treated at the Johns Hop-
kins Hospital Since 1889.**

Dr. W. S. Halsted, of Baltimore, presented this paper. He spoke of the unremitting efforts which he and his colleagues had for years been making to secure true pictures of the carcinomata, and of their failure to succeed in this direction. So subtle were the differences between the growths that he felt it to be well-nigh hopeless. Of three hundred and fifty cases of mammary carcinoma operated on by him, one hundred and fifty had been done in the last three years. These he would not report. Of four hundred and fifty breast tumors of every type, he had found but three sarcomata. One of these was primary, two were secondary; one from the uterus, one from the tonsil. This was considerably below the usual average given for sarcomatous infection. He spoke of the invariable malignant change which came about in the adenoma-carcinomata, and felt that the name "comedo-carcinomata," as suggested first by Bloodgood, was singularly appropriate. Dr. Halsted regretted the difficulty of establishing statistics, because of the vast differences of opinion which existed as to the carcinomatous types. In a series of elaborate charts he tabulated his cases in general as follows: (1) Those in which the cervical and axillary glands were removed at the first operation. (2) Those in which the axillary glands were removed at the first operation; the cervical at the second. (3) Those in which the cervical glands were not removed. In the first class, local recurrence occurred in eleven per cent; in the second, in twenty per cent; in the third, in nine per cent. The cured cases, those more than three years beyond the operation, gave the following percentages: Class 1, forty-five per cent; class 2, thirty-three per cent; class 3, forty-three per cent.

**Late Results in Inoperable Sarcoma Treated
with the Mixed Toxins.**

Dr. W. B. Coley, of New York, presented these statistics. He had nothing new to add touching the preparation of the toxins. Continued observations by a number of other investigators, as well as by Dr. W. T. Bull and himself, confirmed the statement that patients affected with spindle-cell sarcoma responded best to this treatment. Nevertheless, the results were by no means discouraging in the round-cell form. It was now very definitely shown that if there was no response to the treatment at the end of three or four weeks — ample injections having been made — there was no use continuing; the case might be considered hopeless. There was practically no risk from the injections: in a series of two hundred cases he had two deaths, but these occurred before the technique was perfected. Dr. Coley advised its exhibition in hopeless cases of sarcoma only, but felt that there might be a very broad field for his treatment as prophylactic after every case of operated carcinoma. His cures he tabulated as follows: Three to four per cent in the round-cell sarcomata; fifty per cent in the spindle-cell sarcomata. The melanotic forms and the lympho-sarcomata were negative. The toxins were specially indicated in cases of parotid sarcoma, because of the involvement of the seventh nerve. If given with care, the treatment could safely be continued over a period exceeding one year. In conclusion, the speaker said: (1) He advised the routine injection of the toxin in all post-operative cases. (2) It was rarely curable in carcinoma. (3) He indorsed the parasitic theory, and felt that the action of the toxins gave it substantial support.

**Blood Examination as an Aid to Surgical
Diagnosis.**

Dr. J. C. Bloodgood, of Baltimore, presented this paper. The question which he sought to solve was, In abdominal contusions complicated with intestinal rupture, were there hemic conditions which occurred with sufficient promptness and certainty to constitute a guide for or against operation? By a series of extensive charts, he showed that

as yet we knew of no such conditions. Another question he had tried to cast light upon by a study of the leucocytosis remained also unanswered: the differentiation of shock and internal hemorrhage. Of very definite import, however, was the hemoglobin estimation prior to operation. In cases in which surgical intervention was not imperatively called for, fifty per cent or less should contraindicate the administration of a general anesthetic. An anemia which exceeded this percentage constituted an undoubted danger. Should the case call for a general anesthesia, the operation must be made as short as possible. Because of the infinite number of factors which served to vary the leucocyte count, it was difficult to speak authoritatively, but the speaker felt confident that post-operative leucocytosis was an assured fact. Leucocytosis was most important in the diagnosis of intestinal obstruction. Peritonitis showed also a constant rise—except in cases of profound depression—but it was here of little use as compared to the former condition, in which early operation would save life. In conclusion, he said that even a very great leucocytosis was in no way a pathognomonic sign. But it was at least as important as temperature, pulse, and respiration, and doubtless of more value than any single one of the three. Twenty thousand leucocytes, twenty hours after the onset of an attack, was a very sure guide to operation, no matter what the clinical symptoms might be.

Blood Examinations in Relation to Surgical Diagnosis.

Dr. J. B. Blake, of Boston, read this paper on behalf of himself and his two colleagues, Drs. J. C. Hubbard and R. C. Cabot, of Boston. He first considered the leucocyte count during ether anesthesia, and detailed a series of observations which led the authors to conclude that the effect of ether was nil. Post-operative leucocytosis disappeared in thirty-six hours. In simple fractures the count was rarely about 12,000. After operations for malignancy, the hemoglobin gained, which was contrary to the usual belief. The blood in relation to typhoidal perforations afforded nothing

that was reliable. The so-called "wave" was due to extraneous causes. The condition of the blood after prolonged muscular exertion approached that found in certain diseases. In the so-called Marathon races, recently held near Boston, the leucocytosis was in most cases up to 20,000; the polymorphonuclear cells increased seventy-three to ninety per cent; the eosinophiles were absent, the lymphocytes diminished.

The Effect on the Blood of Ether Used as an Anesthetic.

Dr. J. Chalmers Da Costa, of Philadelphia, read this paper. So much just criticism had been made of previous reports that all the patients on whom he had recently worked had been subjected to the most careful preparation, particularly purgation and diaphoresis. He found that under ether there was an increase of the red cells, a diminution of the hemoglobin, and a reduction of the color index. The erythrocytic increase he felt to be due to a loss of the fluids of the blood. He concluded as follows: Etherization produced marked increase of hemolysis. He set forty per cent of hemoglobin as the limit for operation. If below seventy per cent, there should be as little purgation as possible prior to operation.

Examination of the Blood in Relation to Surgery of Scientific Value, but Too Often of No Practical Value and May Misguide the Surgeon.

Dr. John B. Deaver, of Philadelphia, read this paper. He said that blood counts had been forced too freely down the throat of the operator. They were useful within very narrow limits, but were of greater value to the surgeon than any other laboratory information. He vigorously denied that anemia of any degree should offer a bar to operation, if such were demanded, and cited a case in which he had operated when but twenty-seven per cent of hemoglobin existed, the patient doing well. The heart and kidneys often contraindicated much more strongly than any anemia, and yet we operated! Bedside observations were of greater value than any reports from a mere laboratory man.

In the discussion which then opened,

Dr. B. F. Curtis, of New York, expressed very great surprise at the reports from Boston. From a long series of observations in his service at St. Luke's Hospital he had concluded that leucocytosis of a considerable degree existed during ether anesthetization, without regard either to the operation or to the patient's condition. In three cases of intraspinal anesthesia a progressive increase, due to the cocaine, was noted in from one to four or five hours. At St. Luke's, operative leucocytosis was a fixed factor, and often persisted so long as seriously to interfere with the use of the blood count to foretell a possible wound infection.

Pancreatitis, with Special Reference to Chronic Pancreatitis.

Mr. A. W. Mayo Robson, F. R. C. S., of Leeds, Eng., presented this paper. It was astonishing, he stated, how much had recently been written touching the surgery of the pancreas. Pancreatitis in every form had been described, but we were still sadly in the dark as to its etiology, and even more so as to its diagnosis. Until very recently pancreatitis was never differentiated from affections of the gall bladder, and even now it was difficult, even with the best methods at hand and in the presence of an open operation, to differentiate it from carcinoma of the head of the pancreas. It seemed strange that although stones had been successfully removed from the common duct for more than ten years, we were only just beginning to realize that whatever obstructed this duct might also block the pancreatic outlet. Inflammatory conditions of the pancreatic duct had been ignored, but they occurred just as in the biliary passage and presented precisely the same variety of type. The most important symptom of pancreatitis from a non-operative standpoint was an astounding and very rapid loss of weight. Operatively, of course, the well-known but equally little-understood fat necrosis could not be considered pathognomonic. For other aids to diagnosis, aside from the physical examination of the tumor, he looked to physiological chemistry. He had observed certain peculiar yellow crystals, arranged in rosettes. These could be obtained from

the urine through the action of phenylhydrazin in jaundiced cases in which the pancreas was involved. Mr. Robson did not know what they might be, but hoped to be able by their aid to differentiate pancreatitis complicated with icterus from simple catarrhal jaundice. Just as the ducts of these two great glands were similarly involved, so the parenchyma of the pancreas suffered the same inflammatory changes as the liver. Other less valuable diagnostic points were pale-colored stools and glycosuria, but these when present occurred too late to be of note; lipuria was very rare. Etiologically, germ infection had now been shown to be the most prominent factor; but cholelithiasis, malignancy, and various of the zymotic diseases were doubtless important factors. As a rule, however, the cause was enigmatic. There were three possible paths of entry for infection: by contiguity; via the blood; by direct ascension of the duct, this last being by far the most frequent. The author touched most interestingly on the chemistry of fat necrosis. Great quantities of this fat split into fatty acids and glycerin; the acids united with the calcium of the blood and were deposited. This was of paramount import, for it offered an explanation of the hemorrhages in the acute form and gave substantial ground for the treatment by the chloride of calcium. Another possible cause of the hemorrhage might be looked for in the minute anatomy of the gland, which contained so very little framework. Thus, though the pancreas was the best protected organ of the body, the very slightest trauma might lead to the so-called hemorrhagic pancreatitis. This had caused him to adopt the following conclusions and classification:

- (1) In certain cerebral diseases there was a general tendency to hemorrhage from the pancreas.
- (2) Hemorrhage might occur with or without jaundice.
- (3) Acute and chronic forms of pancreatitis might occur without hemorrhage.

He would therefore classify pancreatitis into the acute, subacute, and chronic, using hemorrhagic pancreatitis only as a type of the acute form. Treatment of the acute form called for exploratory

operation with the same voice as acute appendicitis, incision being made in front or behind in the left costo-vertebral angle. Treatment of the subacute form was more promising. It comprised an anterior incision for the localization of the pus, which should be drained from the rear. The treatment of the chronic form was similar, but here drainage was often indirect via the gall bladder. Of this form, ninety per cent recovered.

Gall Stones and Acute Pancreatitis.

Dr. E. L. Opie, of Baltimore, spoke of the relation existing between gall stones and acute pancreatitis. The common bile duct in passing down to the duodenum received the pancreatic duct. From this, for some little distance, it was separated by a delicate membrane. Prior to entering the gut, they coalesced to form a sort of cloaca. The mouth was the narrowest portion of the tract, and here the stones lodged. Calculi from 3 to 5 mm. gave very different conditions from those of larger size — the small stones blocked the mouth of the papilla, leaving the orifices of the two ducts patent. There was thus established a free path for the bile direct from the liver to the pancreas. Large stones blocked all three openings and produced very different conditions. One hundred per cent of dogs whose pancreas was injected with bile developed a more or less grave pancreatitis.

Treatment of Chronic Ulcer of the Stomach.

Mr. A. W. Mayo Robson, F. R. C. S., Leeds, Eng., contributed this paper. Chronic ulcer was a grave menace to human life; its treatment, therefore, was of paramount importance. Three-quarters of all cases of ulcer yielded to medical care in from four to five weeks. The remaining quarter was now cared for surgically with a mortality of but a little over five per cent. Prolonged preliminary treatment was unnecessary; antiseptic mouth washing and lavage served to clear the stomach of germs in two days if the food be aseptic. In considering the possible procedures he felt that gastro-enterostomy, which had the lowest mortality, was the best of all. He preferred the posterior operation, and

with his decalcified bone bobbin it could be done in fifteen minutes. Out of one hundred and seventy-seven patients operated on one hundred and sixty-three recovered.

Gastro-Enterostomy.

Dr. J. W. Mayo, of Rochester, Minn., made gastro-enterostomy the subject of his remarks. In most cases it was distinctly the operation of choice. There were two classes of cases: (1) ulcers in the pylorus in dilated stomachs; (2) ulcers in the pylorus in small stomachs. He preferred the anterior operation, and had used Murphy's button in sixty-one cases with about one per cent of deaths.

Dr. T. A. McGraw, of Detroit, spoke of the value of his elastic ligature in these cases. It was clean, could be quickly inserted, and would surely cut through within seventy hours.

Dr. W. G. McDonald, of Albany, had had experience with two cases of gastro-enterostomy, which, cured for the nonce, terminated within a year in carcinoma. This led him to feel that all scars should, if possible, be excised.

Dr. Rodman, of Philadelphia, agreed with the last speaker when the ulcer was situated anteriorly.

Mr. Robson, in closing, thanked the society for the hospitality and courtesy extended him.

Discussion and Remarks on Pulmonary Insufflation for the Prevention of Surgical Pneumothorax, with Demonstration of New Apparatus for Artificial Respiration.

Dr. R. Matas, of New Orleans, presented this paper. He emphasized the value of intubation, stating that by this direct method there was no danger of pumping air into the stomach, which often happened through the use of the face mask. He pointed out some of the weak points of the Fell-O'Dwyer apparatus; cited its failure in the hands of Dr. Keen in a recent pneumototomy, and exhibited an instrument which he felt to be a distinct improvement. Its importance and characteristics were: a mercurial manometer which would prevent the pressure rising about 6 mm., above which point traumatic emphysema was apt to occur; an ingenious automatic

cut-off which regulated exactly the amount of air insufflated. These were the two details which he considered of the greatest importance in this branch of pneumonic work.

Resection of the Chest Wall for a Large Sarcoma; Successful Use of the Antistreptococic Serum.

This paper was presented by Dr. W. W. Keen, of Philadelphia. The author gave the details of the operation in full, and in conclusion made special reference to the following details: (1) His method of separating the tumor from the chest wall. (2) The anterior and posterior division of the ribs prior to the opening of the pleura. (3) Fell's apparatus with mouthpiece was not satisfactory; he preferred the Bloom-Matas instrument. (4) The suture of the lung to the chest wall was followed by no untoward result and abolished post-operative pneumothorax. (5) The results of the antistreptococic serum seemed to be quite striking. (6) Blood examination was of the utmost value, a streptococcus septicemia having been proven by it.

Phlebitis following Abdominal Operations.

Dr. A. Vander Veer, of Albany, read this paper. Considering the trauma sustained by the great abdominal veins, it was a wonder that phlebitis was not more common. He had recently had four cases, one closely following the other; he was at a loss for any explanation of their etiology. Maybe phlebitis was of septic origin; perhaps too tight abdominal bandaging was a factor. In all his cases there was primary union of the abdominal wound; at no time was the patient's position a constrained one. It was possible that the distribution of the left abdominal veins favored phlebitis, just as in varicocele, for the disease appeared almost always on the left side.

Dr. George R. Fowler, of Brooklyn, said that the importance of this lesion varied with the frequency of its occurrence; with its percentage of mortality; with the duration of ensuing disability. In the past fifteen years he had operated on some three thousand cases, from a study of which he found that sixteen, or

0.59 per cent, developed phlebitis. Two were double and ten followed cases of appendicitis, in which marked infection was present; the rest developed in pelvic cases not septic. The clinical history of his cases was as follows: 1. Advent in from ten days to three weeks after operation. 2. Rarely ushered in by a chill. 3. Dull pains in the femoral region and in the parts just above Poupart's ligament. 4. Often an increased pulse rate without rise of temperature. 5. Palpation revealed the rope-like vein. 6. Edema of the extremity was not marked if the patient was prone; it developed on standing and was much aggravated by walking. The prognosis as to life was good; there was more or less disability in periods ranging from three months to one year. The treatment comprised rest and counter-irritation. Dr. Fowler deprecated the excision of a vein which experience showed would ultimately undergo complete restoration of function.

Dr. W. J. Mayo, of Rochester, discussed twelve cases. Of these, three had pulmonary embolism. One patient died; he had a good, strong pulse to the last moment. In the two cases of recovery the pulse was exceedingly weak. This factor saved their lives. One-half of his cases were on the right side.

Movable Kidney: Its Cause and Treatment.

Dr. M. L. Harris, of Chicago, read this paper. From a series of very elaborate measurements in women, men, and children, Dr. Harris demonstrated that the location of the kidney bore a definite relation to the body form. Dividing the abdomen into three zones, he found a very constant relation between pro-lapsed kidneys and those body forms in which the nephric zone was abnormally small. He felt that the etiological factors commonly given bore but little if any causal relation to movable kidney. The object of the operation should be not to lift the kidney from the lower zone into the middle, which was too small for it, and there sew it fast, but rather to obliterate the excess of space in the lower zone, and, without anchoring it absolutely, limit its nefarious excursions.

THE HANDSOMEST SUITE OF PHYSICIANS' OFFICES IN THE WORLD.

It is in the Reliance Building, 100 State street, Chicago.

The Reliance is famous as being the office headquarters of a greater number of physicians than any other building in Chicago, which also means greater than in any other building in the world, for in no other city, in this or in foreign countries, is the custom so general of having "down-town" offices, that is offices in the business center of the city. Not in New York, in Philadelphia or Boston, nor yet in London, Paris or Berlin, do the members of the medical profession congregate in great office-buildings as they do in Chicago. Therefore, from the nature of the case, the finest offices in Chicago are the finest in the world, and the finest in the "Reliance" are the finest in Chicago. There are two hundred physicians in this building.

Suite 500, Reliance Building, consists of a large reception hall, finished in mahogany and richly furnished. Adjacent to the reception hall are five suites of elegant offices, each consisting of two rooms, a consulting-room and a treatment-room. The offices are occupied by Dr. Chas. Adams, Dr. Chas. G. Fuller, Dr. Chas. Gatchell, Drs. A. E. & W. M. Thomas, Dr. Howard L. Simmons (D. D. S.), and Dr. Geo. D. Richards.

The corner office, having windows on both Washington and State streets, is occupied by Dr. Simmons, who is assistant to the Chair of Dental Surgery in the Chicago Homeopathic Medical College. With its large windows and abundant light no office in Chicago is better adapted to its purpose. Dr. Simmons' hours are 9 to 12 and 1 to 4. Telephone, Central 3422.

Next is the office of Dr. Chas. Adams, Professor of Surgery in the Chicago Homeopathic Medical College. His practice, as has been the case for many years past, is confined exclusively to surgery. His hours are from 1 to 3. Telephone, Central 3422.

Next to this, on the State street front, is the office of Dr. George E. Richards (Hahn. Med. Coll., Chic., '79). His hours are 2 to 4 p. m. Telephone, Central 3422.

Dr. Richards' residence is at No. 50 Bellevue Place. He has a large practice in the best residence district of the North Side.

Next to this, still on the State street front, is the office of Dr. Arthur E. Thomas, Associate Professor of Theory and Practice of Medicine and Clinical Medicine in the Chicago Homeopathic Medical College. Dr. Thomas' office is thoroughly equipped for the treatment of all forms of chronic diseases, and he is prepared to examine cases in consultation difficult of diagnosis. He has a full and very complete set of electrical apparatus. His hours are 2 to 4. Telephone, Central 3422.

In the same office, with hours from 12 to 2, is Dr. Wesley M. Thomas, Adjunct Professor of Medicine and Lecturer on Clinical Diagnosis in the Chicago Homeopathic Medical College. Dr. Wesley Thomas has an established business in the examination of pathological specimens and fluids, in blood-analysis, and examination of stomach contents. In addition to the many physicians in Chicago who seek the benefit of his skill in this line, he also receives much business of the kind from out the city. Telephone, Central 3422.

The two offices on the Washington street front are those of Dr. Fuller and Dr. Gatchell.

Dr. Chas. G. Fuller, whose practice is limited to the diseases of the eye and ear, has the middle suite on the Washington street front. His offices are very completely equipped and the large north windows afford most favorable light for his line of work. His hours are 9 to 12 and 2 to 4. Telephone, Central 3422.

Dr. Ch. Gatchell, Professor of Diseases of the Heart and Lungs and of Physical Diagnosis in the Chicago Homeopathic Medical College, has a commodious office completely fitted for the diagnosis and treatment of diseases of the chest. Apparatus of every kind, including a pneumatic cabinet, a static machine, equipped for fluoroscopic and X-ray work, and other necessary adjuncts to his line of work, are provided. In addition to his office practice Dr. Gatchell does an extensive consultation business,

both in and out of the city. His regular hours are from 2 to 4. Telephone, Central 3422.

On the desk in each office is an extension telephone, all connecting with the station in the reception hall, where an operator is always in attendance. Central 3422 is a long-distance 'phone and every physician in the suite can be reached from any city in Illinois or the surrounding States.

Illinois Homeopathic Medical Association.

The forty-sixth annual meeting of the Illinois Homeopathic Medical Association, held at Masonic Hall, May 7, 8, 9, under the presidency of Dr. F. E. Downey, was a great success. The newly-elected officers are:

Dr. E. H. Pratt, Chicago, President.

Dr. O. B. Blackman, Dixon, Ill., 1st Vice President.

Dr. N. Starr, Charleston, 2d Vice President.

Dr. F. E. Downey, Clinton, Treasurer.

Dr. Edgar J. George, Chicago, Secretary.

Dr. Alice Barlow Brown, Chicago, Provisional Secretary.

Chicago Homeopathic Medical College.

At the annual meeting of the Board of Directors of the Chicago Homeopathic Medical College the following officers were elected:

Dr. A. C. Cowperthwaite, President and Acting Dean.

Dr. Chas. Adams, Vice President.

Dr. Wm. G. Willard, Secretary.

Dr. S. H. Aurand, Treasurer.

Dr. Edgar J. George, Business Manager.

Dr. W. S. White, Registrar.

Action was also taken so as to admit women on the same terms as men, and already several women students have signified their intention of matriculating in the school. It is the expectation that next fall the college will enroll the largest class in its history.

Elias Howe invented a machine that has been a potent instrument for the universal spread of serious ovarian troubles, — The Bookman.

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American Institute.

There promises to be a very large attendance at the meeting of the American Institute at Richfield Springs, N. Y., June 18-22, 1901. Elaborate preparations are being made for the comfort and entertainment of all who attend.

Alice Butterworth, M. D., has been elected to the position of Assistant to the chair of Surgery in the Chicago Homeopathic Medical College, and Dr. Mary E. Hanks has been made Lecturer on the Hygiene of Infancy and Clinical Assistant to the chair of Diseases of Children.

At the beginning of the year we commented upon Parke, Davis & Co. being the first to standardize drugs, and that it was a twentieth century movement begun during the nineteenth century, and all those adopting this up-to-date method (as all will have to) should acknowledge that P., D. & Co. were the first. I received a catalogue of a Philadelphia house to-day, stating that all their drugs were so tested and standardized by animal experiments; which proves that they recognize a good thing and modestly adopt it, forgetting to give credit to P., D. & Co.



That the greatest wag in the world is a dog's tail.

That the devil is an artist who paints things in very bright colors.

That people who blow their own horn always play dreadfully out of tune.

That you may cut yourself while shaving, or shave yourself while cutting.

That before a man goes to the devil he aids in sending plenty of others there.

That an anarchist is a man who cannot stand the prosperity of other people.

That every man should keep a fair-sized cemetery in which to bury his faults.

That the man who never gives up misses the answers to many good conundrums.

That many people who are carried away with enthusiasm are brought back in disgust.

That man was the problem of the eighteenth century and woman is the problem of the nineteenth.

That girls are seldom what they seem; but then, they don't want to be.

That there's no luck in horseshoes; they never make both ends meet.

That the uses of adversity may be sweet but children don't cry for them.

That thirteen is an unlucky number when judge and jury are all against you.

That you should believe only half that you hear, but be sure to select the right half.

That every man is more or less of a hypocrite except when he is all alone by himself.

That you should not judge a man's character by the umbrella he carries; it may be borrowed.

That there are some men who act according to their lights, but more who go according to their livers.

That an egotist is a man who listens very hard when he is talking to you but is hard of hearing when you are talking to him.

MEDICAL ERA

CH. GATCHELL, M. D., EDITOR

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INSANITIES FOLLOWING AUTOGENIC INTOXICATION.

Of all the tissues of the body there is none which is more sensitive to blood-changes than the nervous system. Delirium and mental alienation occur as a symptom in many somatic diseases. Typhoid and pneumonic fever are, in many cases, marked by symptoms of mental disturbance. In almost all such instances it is the perverted blood-serum, acting upon the neural tissues, which produces the irritation, giving rise to symptoms of mental disturbance.

What has already been said refers only to acute conditions. There are, in addition to these, chronic states, involving mental alienation, which are directly referable to autogenic intoxication. Prominent among these are the uremic psychoses, which are due to the retention in the blood of various tissue poisons which should be eliminated through the kidneys. The mental symptoms belonging to this condition occur in the terminal stages of almost all cases of chronic nephritis. The symptoms, as a rule, are not active; they consist of headache, sleeplessness, alteration of disposition, and inability to think or reason clearly, which amounts to actual defect in intelligence.

Other autogenic forms of mental maladies are found in the end-stages of diabetes mellitus, and also in gastro-intestinal affections, while cholemia, exophthalmic goitre and gout all are responsible for a share of the cases which are classed among the insanities.

Our reason for bringing this subject to the attention of our readers is in order to notice the auto-intoxications which are of intestinal origin, and which are accompanied by nervous affections or mental derangement.

There are two kinds of antotoxis from the intestinal canal which are recognized by the presence of certain nerve-poisonous substances in the urine. First is acetone, the presence of which produces the condition of acetonuria. Diacetic acid — a substance very similar to acetone — is occasionally present in the urine. Another derivative of acetone is oxybutyric acid, which is now generally regarded as the agent which gives rise to the acid intoxication that produces diabetic coma, in which condition it may be found in the urine in large quantities. These substances are all nerve poisons. Van Jaksch and Wagner found them in a large number of cases showing certain types of mental symptoms. But it must be noted that the same series of symptoms occur when only coprostasis, without acetonuria, is present. On the other hand, it must be said that the symptoms are not found in all cases in which acetonuria is demonstrated.

But a more frequent form of mental disease due to autogenic intoxication is that which arises from absorption of the products of the indoxylsulphate-of-potassium series. The forms which occur most often are indican (indoxyl-potassium sulphate), and skatol (skatoxyl-potassium sulphate). These have their origin in the decomposition of the albumin in the intestines, under the influence of bacteria. The indican originates after fermentation in the small intestine, and skatol in the large bowel.

It is accepted that indican and skatol act as irritants to the nervous system, for they are rarely found in large quantity in the urine of patients who have no mental or neurasthenic symptoms. In order to appear in the urine they must exist in the blood in very large quantity, for much must be destroyed by the liver, and oxidized in the general circulation.

The indoxyl sulphate-of-potassium is produced by putrefactive changes in the intestines, bacterial in nature, by whatever condition brought about. There are many conditions of obstipation which give rise to the process, but it is especially liable to occur in obstruction of the bowel, and in coprostasis. A person who is habitually regular, but who goes without an evacuation for a week is very prone to suffer.

The clinical pictures, in the realm of the nervous sphere, produced by the variety of autogenic intoxication described assume the forms of hysteria, neurasthenia, and confusional insanity. Whether due to the toxins of the ethereal-sulphate group, or to the acetone series, the symptoms are essentially similar. The majority of cases of confusional mania fall under this category. In most such cases there is hallucinatory excitement alternating with mild stupor, which may be mistaken for melancholia of a passive type.

The symptoms are usually gradual in onset. The attack is marked by headache, of a dull, heavy character; there is pre-cordial anxiety; a feeling of distress; hypochondriacal ideas; inhibition of thought, even to mental confusion and stupor. Hallucinations take on various forms, the attending confusion allowing of no correction. There may be extreme motor agitation, and decrease in physical strength. In some cases the confusional manias follow a circular course.

The usual course of the disease is for the symptoms gradually to subside under proper treatment, mental health being restored in from eight to twelve weeks. In severe cases death may follow an early developing heart weakness. Pneumonia may sometimes be the terminal event.

In the few cases which have come to post-mortem there have been found primary and secondary changes in the mucous membranes of the intestines, especially of the colon, together with coprostasis, and also parenchymatous degenerative changes in the liver and kidneys.

The treatment of cases of hysteria, of neurasthenia and of confusional insanity due to the absorption into the blood of the ethereal sulphates calls for attention to the gastro-intestinal sphere. All symptoms of "dyspepsia" should receive appropriate treatment, both by medicinal agents, by dietetics, and by hygienic measures. But, above all, must constipation be overcome, and if a condition of coprostasis exists, it must be corrected.

In the treatment of the last named condition much aid can be obtained from the use of the sinusoidal current, of gastric lavage, and of free rectal irrigations.

The best method of gastric lavage to be employed in these cases is that devised by Dr. M. B. Blouke, of Chicago, a description of which may be found in the *Medical Era* of May, 1900.

The important point to be borne in mind by the physician is, as stated by Berkley, that the presence of confusional insanity nearly always indicates a toxemia from some source. The toxemia may be uremic, or it may be of intestinal origin. In all such cases examine the urine carefully. If not of uremic origin the presence of indican in the urine will reveal its intestinal source.

Cases of insanity of the types indicated belong to the physician to treat. They should not be sent to the asylum.

The cases referred to belong to the class described by Dr. Clarence Bartlett in the present issue of the *Era*, which he speaks of as those which "should be diagnosed as examples of auto-intoxication, which should not be classed as lithemic."

THE AMERICAN INSTITUTE OF HOMOEOPATHY—1901.

The meeting of our National organization at Richfield Springs, N. Y., though in numbers small, did not lack in enthusiasm or in intensity of interest.

Those who attended greatly enjoyed the occasion. We think, as it turns out, that it is very fortunate that the Institute was taken to Richfield this year, for by so doing the fact was clearly and finally demonstrated that isolating the Institute and carrying it far from the vicinity of great centers of population with convenient railroad facilities, even when there are at such places so-called "outside attractions," does not insure large attendance at the meetings of the scientific sections.

But this did not prevent some very good work being done, for the quality of the papers read was of a high order, and those who heard them and took part in the discussions were well repaid for their roundabout journey to Richfield. The next volume of transactions will be one of great value. The present administration deserves much credit for having brought in applications from a large number of new members.

As its chief officer for the coming year the institute elected James C. Wood, M. D., of Cleveland.

WISCONSIN MEDICAL SOCIETIES.

It was a memorable occasion.

A joint meeting of the three State medical societies of Wisconsin — "regular," homeopathic and eclectic, was held at the Fountain House, Waukesha, on the evening of Wednesday, June 26th, 1901.

The occasion will become historical. The address of welcome pronounced by Dr. H. Reinieking, of Sheboygan, on behalf of the State Medical Society of Wisconsin, was a dignified appeal for harmony and unity of action on the part of the members of the three branches of the profession in all matters of common interest, and in which the profession stands on common ground.

A handsome bronze badge was distributed, and worn by all members of the three organizations, bearing the inscription — "Wisconsin Medical Societies."

This bronze disc is well worth preserving.

ORIGINAL ARTICLES

THE CLINICAL RELATIONS AND DIAGNOSIS OF THE URIC ACID DIATHESIS.

BY CLARENCE BARTLETT, M. D.

PHILADELPHIA.

(Read before the Section in Clinical Medicine, American Institute of Homeopathy, June 20, 1901.)

In 1877 the late Dr. Murchison published his popular little work on the functional diseases of the liver. In it he described a condition characterized by a "sense of weight and fullness in the epigastrium and region of the liver, flatulent distention of the stomach and bowels, heartburn and acid eructations, oppression and weariness, sleepiness after meals, bitter taste in the mouth, variable appetite, excessive secretion of viscid mucus in the fauces and back of the nose, furred tongue often large and indented at the margins, constipation with scybalous motions sometimes dark and sometimes clay-colored, or diarrhea, palpitation of the heart, irregularity or intermittence of the pulse, frontal headache, restlessness at nights, bad dreams, and attacks of vertigo or dimness of sight often induced by particular articles of diet." He furthermore spoke of the above mentioned symptoms being associated with deposits of urates and uric acid in the urine.

Now, the group of symptoms so ably described was by no means a new one; on the contrary they constituted what the laity, from time immemorial, had known as "biliousness." But he proceeded to give the symptom complex a name, and that name was "lithaemia." In the vernacular of the day the new name "caught on," and under the inspiration of the writings of DaCosta, Gray, Dana, Haig, Satterthwaite, Luff, and many others, the uric acid disease has become both fashionable and popular. So many of the laity have had their ailments diagnosed as "lithemia" that there seems to be very good reason for a remark by one of my patients to the effect that the only difference between a diagnosis of uric acid and appendicitis is that of consulting a physician or a surgeon. Of course I resent-

ed such a gross generalization, but at the same time I could not but feel that it was in a measure deserved in view of the frequency with which many men assign uric acid as the *fons et origo* of the majority of chronic diseases. If a child is scrofulous and the urine throws down uric acid sediment, lithemia is diagnosed; and the same diagnosis applies if it has night-terrors, epilepsy, or what-not.

It was but recently that I saw a patient in whom uric acid diathesis had been diagnosed, and yet the trouble was due to post-nasal adenoids. During the early fall I was about to enter a house to see a child in consultation, when the attending physician, who is a man of exceptional ability and a fine clinician, directed my attention to the patient's sister — a miserable specimen of childhood, emaciated and peevish. As he did so, he remarked, "Did you ever see such a fine specimen of the uric acid diathesis?" Knowing the family as I did, I protested against any such interpretation of the child's condition. It was a home of dissension and discord "from morn till noon, from noon till dewy eve." If that child had any nerves, and most children have, there was every reason why the little sufferer must have had an unhappy time of it. "Laugh and grow fat" was not a part of its daily life. During the winter one of the discordant elements retired and remained away from home for a number of months. Now that the household was at peace, that little one picked up in health to a remarkable degree; in fact, she now presents the same appearance as any healthy child of her age. Both of the cases cited above were ascribed to uric acid poisoning, because of the discovery of that substance in their respective urinary sediments.

A recent case of my own is furthermore illustrative of the lesson which this paper is designed to teach. The patient was a man of high mental endowment, occupying a position requiring quick thought and action. His employer was a man of great business enterprise, but possessed of an exceedingly trying disposition, so great indeed that his manners and methods are a great drawback

to his popularity. It was not the amount of work performed or the great responsibility that caused my patient to be neurasthenic, for whether the work was light or heavy the symptoms continued. As soon, however, as he gave up his situation, his symptoms disappeared and have not returned at this writing, although he is now engaged in just as heavy work, but with more congenial surroundings. Had I depended upon the presence of uric acid in the urine for my diagnosis this case would have been called one of lithemia.

The common belief that uricacidemia is a widespread clinical condition, and my failure in the study of my patients to assign it a proper place clinically, has led me to investigate the data upon which its diagnosis is founded. These investigations have been far from satisfactory, for the more I have studied the teachings of authorities generally, the less clear have my ideas become. The presence of uric acid sediments in the urine seems to be the main symptom upon which reliance is placed, and yet it is due most writers to say that they admit an inability to state with any positiveness whether such sediment is merely an effect or a cause, or simply an incident in the clinical course of the cases. When one studies the many causes of uric acid sediments he must come to the conclusion that as a symptom its diagnostic value must be measured entirely upon the associated clinical phenomena and the life-history of the patient.

Uric acid sediment is exceedingly common in perfectly normal urines that have been permitted to stand for more than twelve hours. This being the case, very few urines should be without it, especially when the physician examines specimens of the entire twenty-four hours. If, however, uric acid appears within six hours after voiding, it may be regarded as pathological.

Again, if the urine is unusually concentrated or of excessively acid reaction, uric acid may be precipitated, although it is present in less quantity than normal.

It may appear temporarily in otherwise healthy individuals who have in-

dulged rather freely in a highly nitrogenous diet, or in rich food which has unduly taxed the hepatic capacity.

When an individual is leading a sedentary life, the ability of the liver to oxidize the waste products is impaired, and again uric acid excretion is increased. In such cases there is nearly always associated defective metabolism, and the patient experiences certain symptoms, of which headaches, emaciation and nervousness are prominent. Cases of this character may readily be characterized as examples of lithemia, and yet we are not justified in asserting that the phenomena are the result of uric acid poisoning, for the increased elimination may be one of the associated results of the defective metabolism, and not a cause of the same.

The occurrence of uric acid deposits in neurotic or hysterical subjects is not to be regarded as evidence of lithemia as the cause of the trouble, for it is well known that this substance is soluble in urines rich in pigments. If, as often happens in cases of hysteria, the urine is pale in color, of low specific gravity, and large in quantity, uric acid is commonly precipitated, although not present in increased quantity.

There are cases, however, in which the uric acid diathesis may be appealed to as explanatory of the patient's illness. Thus, one of my patients, a woman of fifty years, is subject to violent hysterical seizures. She has periodical headaches of great severity, joint complications, large uric acid sediments, with other symptoms. Her brother presents the classical stigmata of chronic gout, and has had numerous attacks of the acute disorder. Her father was likewise a sufferer from gout. She herself has of late exhibited evidence of interstitial nephritis. This case I would call one of uric acid poisoning, or, if you will, irregular gout. Whether the hysterical symptoms are a result of the same, I would not say positively. Were it not for the gouty ancestry and the well-marked evidences of transmission of the disease to her, I would regard the case as one of hysteria, such as are seen in every-day practice by numerous physicians.

An increased uric acid deposit may result from actual increase in the quantity of uric acid excreted. Under such circumstances, there must have been previous retention or present increased formation. Increased formation may result from any condition in which there is deficient oxidation changes in the system. Hence it may happen that uric-acid deposits may occur in connection with cardiac and respiratory disorders. And, hence again, we may expect uric acid sediment in the urines of children who have post-nasal adenoids. Is it not ridiculous under such circumstances to attribute the long train of symptoms ensuing upon the resultant post-nasal obstruction to lithemia? Again, when a heart becomes incompetent, the impaired pulmonary circulation leads to imperfect aeration of the blood, and we have the same practical result as that ensuing upon impeded respiration from any cause, i. e., deficient oxidation and uric acid formation.

Uric acid is found in increased quantities in the urine in the course of many liver affections. Here the symptom is dependent upon imperfect oxidation of the waste matters. Practically, we find the condition known for many years among the laity as biliousness.

In gout we find opposite conditions according to the stage of the disorder at which the observations are made. During an acute attack, uric acid elimination is deficient. At the same time, it is deposited as biurate-of-soda in certain joints and other tissues, producing symptoms concerning the nature of which there can be no dispute. An examination of the blood or of the serum produced by a blister at this period discovers increased uric acid. During the stage of convalescence uric acid excretion is increased. At the same time, it disappears from the blood and the blood-serum. Few, if any, dispute the uric acid origin of gout. Now look at the difference in the clinical relations of gout and uric acid, and the so-called lithemic states and the same poison, if poison it be. In the case of gout, there is a well-defined set of symptoms presenting but few variations, excepting in so-called ir-

regular gout, and even this follows a definite course, so that it is easy of recognition. In other words, the clinical phenomena are exactly what we expect following any other poisoning, i. e., well-defined and characteristic; and this applies whether the poison be of mineral character, as arsenic or mercury; vegetable, as atropia strychnia, or opium; animal, as the snake-poisons; bacterial, as in typhoid fever, diphtheria, and cholera. Each poison, it is true, is capable of producing atypical phenomena dependent upon the idiosyncrasies of the patient or the insufficiency of the dose capable of producing characteristic symptoms; but such departures from the standard are not so great but that the nature of the case cannot be readily recognized, even by the inexperienced. But in the case of the many so-called uric-acid disorders, one finds the wildest possible grouping of cases, bearing not the slightest resemblance to each other; e. g., migraine, epilepsy, chorea, cerebral hemorrhage, disseminated sclerosis, renal disease, liver disease, uterine disturbance, sexual deficiency, hypochondriasis, insanity of many kinds, heart-disease, asthma, bronchitis, etc., etc. In addition to these diseases we find mention of the most diverse and contradictory symptoms alleged to be due to lithemia. All of the diseases above mentioned and the many symptom-groups occur in other than in uric acid relations; and it is important to note that the so-called uric-acid cases present no important differences from the idiopathic varieties, unless it be the presence of uric acid sediment in the urine.

The atypical or irregular gout, it is true, presents quite a variety of symptoms according to the organ attacked; or, rather, in which the uric acid is deposited; but in such cases a careful examination nearly always discovers the presence of the essential characteristics of gout at some time in the history of the case, or a well-marked gouty ancestry. Just how uric acid affects the different organs in irregular gout cannot be stated positively; but the views of Roberts, that the damage done by it is due to its deposit in the tissues as an insoluble urate

has found general acceptance. While this is true so far as clinical observations go, nevertheless it is hardly conceivable that the results of imperfect oxidation of waste products as the urates and uric acid are admitted to be, can circulate in the blood and still maintain the system in a state of health.

In the more characteristic cases of irregular gout, the articular symptoms are apt to alternate with those of visceral origin, and the latter incline to conform to a special type. In some instances the extent of the poisoning is so slight that the case does not progress to produce articular symptoms. In others, the joint changes do not appear for many years, and then the visceral conditions disappear. In very many of these cases, a history of gouty heredity may be discovered if the investigation is thorough. But in many of these cases of irregular or abortive gout, the condition of comparative health is maintained only by careful living.

Among the organs more frequently invaded in irregular gout, the digestive tract leads the list. Pharyngeal and tonsillar inflammation is not uncommon in the goutily-disposed. Duckworth describes it as follows: "The gouty throat is like no other. The pillars of the fauces, especially the posterior pair, the velum, and the uvula, are very red and glazed. The uvula is greatly enlarged and elongated, sometimes seeming to fill up the gap between the pillars. It has often an oedematous border and tip. The surface of the pharynx is not so smooth as that of the fauces. It is coarse, with red, glairy prominences upon it, and depressions here and there covered with grayish, slightly adherent patches of mucus, and it has sometimes enlarged venules upon it. In elderly people the redness is less marked."

As to the stomach itself, the most frequently observed condition is indigestion with sour risings, the so-called "acid dyspepsia of the gouty." The paroxysms of this condition are not infrequently associated with the phenomena of auto-intoxication. Sensations of constriction, and weight about the epigastrium, drowsiness after meals, gastralgie attacks,

and nausea with vomiting of glairy mucus complete the clinical picture. But with these symptoms which, after all, may occur independently of gout, there will usually be found if that disease is their cause, the well known gouty stigmata, namely, heredity and the arthritic manifestations. Among the intestinal disorders we find catarrhal symptoms, as shown by chronic diarrhea, or diarrhea alternating with symptoms referred to other viscera not infrequently invaded by gout.

Next to the stomach as regards frequency, the heart may be disturbed by gout. There may be a simple neurosis, as palpitation or irregularity, or by reason of the long continuance of the case organic changes may take place, and we have myocardial changes, degeneration of the coronary arteries, and valvular disease. But even in these the gastric symptoms already referred to are commonly present, leading oftentimes to the ignoring of the heart condition and the attributing of all the phenomena to the stomach alone. Cases of this character are, however, not likely to occur in young subjects, practically all of the patients being past the age of forty-five years. Not infrequently the sufferers from cardiac gout have asthmatic paroxysms.

The long continuance of masked gout leads to arterio-vascular disease, and this brings with it the usual concomitants of that condition, namely, cardiac hypertrophy, interstitial nephritis, and arterio-sclerosis. The same phenomena may also result from long-continued defective oxidation of waste matter, no matter what the character of the latter may be.

A special gouty disturbance of cardiac action is found in tachycardia. Almost invariably this is paroxysmal, appearing after any indiscretion in diet, or as the result of some slight emotion or exertion. So far as physical examination goes, the heart appears to be normal, aside from some slight dilatation in cases that have lasted for some time. It is hardly likely, however, that the structure of the heart is as little altered as the physical signs indicate. In some of them, there may be central nerve lesions, or the

patient may be of a distinctly neurotic habit. Even the so-called reflex tachycardias in which the stomach, for example, is believed to be at fault, may have a gouty basis, together with the organic alterations mentioned as present in the frankly gouty cases. Usually the paroxysms are of sudden onset, following promptly upon an exciting cause. The pulse rate rises to anywhere from 160 to 200 per minute. In one extreme case under my care associated with gouty nodosities of the fingers, it was 240. The associated symptoms are not as severe as the extreme cardiac rapidity would lead us to expect. There are, it is true, some anxiety and precordial distress, and slightly accelerated respiration. Auscultation shows, as one would naturally expect, that the cardiac contractions are insufficient, indeed they seem like flutterings or vibrations. In the extreme case to which I referred above, the patient referred to her paroxysms as "the flutters." The attacks are of extremely varied duration. In some instances they are over in five minutes, while in others they may continue for days. In long standing cases in which dilatation of the heart has ensued, there may be associated evidences of cardiac insufficiency, as cyanosis, pulmonary congestion, enlargement of the liver, etc.

Angina pectoris is not an uncommon affection in the gouty. But it does not make its appearance until arterial changes have become advanced, and there is atheroma of the aorta and coronary arteries.

Of the respiratory affections in the gouty, the two most frequently encountered are asthma and bronchitis. There are but few features of either affection as occurring in the gouty serving to differentiate them from similar attacks resulting from other causes, unless we except the association of arthritic manifestations and the hereditary history. Bronchitis in gouty subjects is apt to be associated with a dry cough, accompanied by considerable pulmonary oppression. It is also liable to be associated with emphysema, but it may also be remarked that any persistent bronchitis, especially if repeated, is apt to be so associated.

Of the cerebral manifestations of the uric acid diathesis, it only need be said that they are all secondary to arterio-capillary changes, and are to be diagnosed by the life history of the patient. The gouty peripheral nervous affections are, on the other hand, quite numerous, and include neuritis, vaso-motor changes, neuralgiae, angio-neurotic oedema, etc.

The urinary affections include interstitial nephritis, prostatic irritability, irritable bladder, urethritis, etc.

A review of the above remarks would lead one to assert that, after all, uric acid is responsible for considerable human suffering, and such indeed is the fact. But then the clinical conditions I have described do not begin to include all the affections which physicians are prone to diagnose as lithemic. They are all, however, which I feel we are justified in including under the category of uric acid affections.

Undoubtedly there is a large class of cases which yield readily to the treatment which is so successful in the management of cases of gout. In a general way such cases occur in persons who eat too much and exercise too little. They are the victims of an auto-intoxication. The toxic agent is probably not always the same in these cases; but the treatment of all of them is identical, i. e., exercise or massage, and limitation of diet, and abstinence from alcoholic beverages.

When one comes to study the subject of lithemia in our text-books, he will be surprised to learn how slightly the majority of them refer to it, and yet passages occur in the same leading one to infer that the subject is one of more than passing importance. Allbut takes up a few pages in the consideration of what I might call hepatic inadequacy. Musser refers to acute and chronic biliousness as synonymous with lithemia. The Twentieth Century Practice of Medicine does not refer to lithemia at all.

The only author describing "lithemia" in a manner that makes his position understood is Weber in the "Reference Handbook of the Medical Sciences," Vol. IV., 1st edition. He refers to lithemia as "a condition in which oxida-

tion is imperfectly performed, and the formation of insoluble compounds of lithic acid and the lithates, instead of the readily soluble urates, is the result." Then he proceeds to give in a very general way the symptoms of lithemia, and then he adds: "These symptoms are most commonly met with in persons of indolent habits and in dyspeptics, and they are not rarely seen in those whose occupation, literary or professional, subjects them to great mental strain, and deprives them at the same time of the exhilarating influence of fresh air and exercise. Among other causes may be mentioned continued worry and anxiety, malaria, lead-poisoning, etc." Finally he remarks: "In my opinion it is often difficult to distinguish between cause and effect; that is to say, nervous exhaustion from excesses or disease may be productive of lithemic conditions through loss of innervating force; or, on the other hand, the functional disturbance of the nervous system may be solely and directly the effect of the lithemic condition. Lithemia associated with neurasthenia is of rather frequent occurrence in this country, and is seen in both sexes, early and late in life. Repeated examinations of the patient's urine, and a searching inquiry into the etiology of the case are necessary in order to arrive at a correct understanding of the condition and to mark out a proper line of treatment."

The main exception which I would take to Weber's remarks is his laying great stress upon the presence of uric acid excess in the urine as a diagnostic factor.

I have not quoted Haig's prolific writings, because he is "a man of one idea." He seems to be possessed of the unhappy faculty of demonstrating conclusively to his own mind that about every ill to which flesh is heir is the result of uric acid poisoning. Whatever may be the subject under discussion, he is sure to "bob up" with his pet theories. It is true that he has done good work, and has greatly increased our knowledge of the subject; but his conclusions are altogether too sweeping to stand the test of time and experience. The practical mind will weigh Haig's facts, assign

them their proper place in medical science, and benefit humanity thereby.

Now, it is not the object of this paper to deny the existence of uric acid poisoning. That it is of frequent occurrence I am free to admit. That it is frequently diagnosed by "hobby riders" must be acknowledged by all. That it is frequently diagnosed as a sort of balm for the feelings of patients to whom a diagnosis of alcoholism, or some other disorder reflecting on the character of the patient would be resented, is also true. Such diagnostic errors do no harm. But it is when uric acid is assigned as the cause of a disease which requires very different therapeutic measures from those indicated in irregular gout, that strong objection should be made to such "hobby-riding." I would formulate my opinions concerning the uric acid diathesis as a cause of disease, and the various conditions which have been incorrectly so designated, as follows:

1. There is a large class of affections distinctly gouty in origin, and which are unquestionably dependent upon uricacidemia. They are best denominated irregular gout. Their symptomatic pictures vary according to the organ or organs bearing the brunt of the toxemia.

2. There is a large class of affections dependent upon excesses in eating and drinking, together with insufficient exercise, which should be diagnosed as examples of auto-intoxication, and should not be classed as lithemic, unless we use that term as synonymous with "biliousness" or hepatic insufficiency. Such hepatic insufficiency may be relative or absolute; that is to say, the functional capacity of the liver may be sufficient to take care of ordinary food and drink, but is insufficient in cases of excesses; or the liver may be inadequately endowed at birth to perform even normal functions.

3. There is a large class of affections generally referred to as functional disease of the nervous system, including hysteria, neurasthenia, and their congeners. Some of these cases are secondary to the causes referred to under the pre-

ceding headings, but the majority are dependent upon hereditary defects in the nervous system, faulty education, bad home environment, emotional causes, etc.

4. Certain diseases presenting a well-defined type, as tic douloureux, migraine, etc., are rarely if ever of gouty or uric acid origin, although they are of frequent occurrence in gouty subjects.

5. Organic diseases of the brain and spinal cord are not of uric acid origin, excepting in those instances in which the original disease had advanced to the stage of arterial degeneration. The fact that uricacidemia may produce arteriosclerosis is not contested by anyone.

6. Arterio-sclerosis is not to be regarded as evidence of the gouty diathesis, for it may result from syphilis, the neurotic habit, heredity, excessive physical exertion, etc. Gout of course is an important cause.

7. Especial care should be observed not to diagnose lithemia when there is some well-defined pathological process capable of producing deficient oxidation of nitrogenous waste. Especially does this remark apply to chronic heart disease, post-nasal adenoids, and respiratory catarrhs.

1506 ARCH STREET.

AN INTERESTING OBSTETRICAL CASE.

BY EDWIN H. WALCOTT, M. D.

ROCHESTER, N. Y.

Mrs. H. A., aged 33 years, and mother of five children, sent for me September 18th, 1900. Upon examination I found her about eight months advanced in gestation, with an enormous distention of the abdomen, caused by the presence of fluid, not only within, but also, as I supposed, without, the uterus. Being somewhat in doubt regarding the latter, I called Dr. N. M. Collins, surgeon of the Rochester Homeopathic Hospital, in consultation. After a careful consideration of the case we were inclined to the opinion that there was an ascitic condition present, due to dropsy of the peritoneum. This opinion was strengthened by the presence of a frequently associated condition, termed "hydramnion," as the

fetus floated in an excess of amniotic fluid. However, her condition was so important and perhaps serious that we insisted on her going to the Hospital for closer observation and treatment, as circumstances might require. She remained in the Maternity only one week, when she earnestly desired to return home. More than a month later, or October 28th, a messenger came for me in great haste, stating that the baby was partially born, with feet and legs presenting. I responded immediately, and was informed that when the membranes were ruptured, but a short time before my arrival, there was only the usual amount of fluid expelled. After a little manipulation and slight traction the child was born alive, whereupon it was noticed that the head was hydrocephalic and considerably larger than usual. In the delivery of the head an enormous quantity of fluid, estimated at several gallons, came rushing down from some source unknown to me. It did not seem possible that so much fluid could have proceeded from the uterus only; and if in part from the abdominal cavity, did it enter the vagina by rupture of Douglas' cul-de-sac, or other tissues about the uterus? However, the mother made an uninterrupted recovery, with the exception of quite an alarming syncope immediately following the escape of the fluid. The child died at the end of the third day.

57 SOUTH VERNON STREET.

TWO DIFFICULT BREECH CASES FROM ONE WEEK'S CONSULTATION PRACTICE.

BY SHELDON LEAVITT, M. D.

PROFESSOR OF GYNECOLOGY IN THE CHICAGO HOMOEOPATHIC MEDICAL COLLEGE.

CASE I. — At 6 a. m. on the morning of March 10th I was called to Mrs. — in labor with her second child. I found two physicians in attendance, one of them an old-school physician of considerable prominence, who had attended the woman in her first labor. Pains had been present for some hours, and the attending physicians had diagnosed a breech presentation.

The circumstances of the first labor were recited in substance as follows: The case delayed in the first stage, the os finally attaining full dilatation; the pains began to flag; the forceps were applied, and, after traction for an hour, delivery was effected, but the child lived only a few hours; the attendant made pelvic measurements and became convinced that delivery of a living fetus could not have been expected.

Confronted by these facts, the attendants in the present instance, in view of the exceeding great desire of the woman for a living child, on finding the breech presenting and on giving several hours to the natural efforts with the presenting part still high above the brim and the os incompletely dilated at the end of that time, had resolved that the patient should be removed to a hospital and a symphysiotomy or a Caesarean operation be done.

"She is still in good condition," Dr. H. said, "and, since I have satisfied myself that surgical intervention alone can give the woman a living child, I think we ought not to delay action."

Up to this point I had not seen the woman. I found her young, thin, cheerful, hopeful.

"You have had a hard time," I said.

"Why, no, I don't think I have yet had a hard time," was the prompt response.

On inquiry I learned that she had had little hard pain — a very encouraging feature of the case, I thought.

Examination revealed an os uteri about one-third dilated, high, disclosing a breech. I tried to reach the sacral promontory, but could not, this fact removing from my mind the possibility of extreme shortening of the conjugate diameter.

To me the case had a promising look, provided we gave it an abundance of time in the early stage. I accordingly recommended her removal to a hospital, so that, should surgical intervention of a serious nature become necessary, it could be practiced under favorable conditions. Seven hours later I saw her at the Streeter hospital with the other physicians. Active, energetic labor had

been on her only two or three hours, it being evident that the early pains had not represented a maximum of parturient effort. There was found to be slight improvement of the physical conditions.

We remained with the patient during the afternoon, making occasional examinations, until, at five o'clock, the breech was found to be rapidly descending, and the crisis of labor, consisting of delivery of the after-coming head, was recognized as at hand. Accordingly every preparation was at once made for the supreme effort, including a transverse position on the bed, in the lithotomy posture. An anesthetic was refused her, as we felt the need of her propulsion aid.

It should be stated that meanwhile I had measured her pelvis with the pelvimeter and it was found to be but slightly below the standard. The child did not appear to be of undue proportions.

The pains being energetic the body rapidly descended; the breech passed the vulva; the legs extended, the arms were quickly drawn down; my finger sought the child's mouth, firm hold having been taken of the legs enwrapped with a dry towel; traction was applied with the body turned at right angles with the maternal body, while one of the attending physicians applied energetic pressure to the vertex as felt in the hypogastrium; and then we had the pleasure, after some tugging, of seeing the head glide through the vulva. But the child was already into the pale stage of asphyxia, from which it was revived with some difficulty.

Both mother and child did well.

CASE II. — On the evening of March 19th I was called by Dr. S. E. Hulett to see Mrs. —, whom he was attending in a second labor.

I found a young woman of 23 years, of spare frame and nervous temperament, suffering frequent recurrence of energetic pain. She had been waited upon in the first labor by some unknown physician, the presentation being breech, and the child stillborn. Dr. Hulett had promptly recognized a second presentation of the breech, and, fearing a repeti-

tion of the first unhappy termination, he deemed it wise to call assistance.

At my examination the presenting nates were found low in the pelvis and the perineum soon began to bulge during a propulsive effort. We turned the patient across the bed and brought her hips to the edge of it. Dr. Hulett sat at one side administering the anesthetic in sufficient quantity to dull the pain, but not to destroy consciousness, and affording aid by abdominal compression.

Labor proceeded apace; the breech was driven through the vulva; the legs were soon easily extended; and the arms were liberated. The fingers were pushed over the perineum into the child's mouth so that firm flexion of the head could be maintained while traction was being applied to the legs, they having been quickly wrapped in a towel to ensure me a firm hold. Traction was made at right angles to the woman's body, which speedily liberated the head. The child was active and cried lustily.

The secundines were delivered by combined traction and pressure. The perineum was but slightly torn, three stitches closing the rent. A good recovery followed.

900 RELIANCE BUILDING.

AN UNUSUAL CASE OF MASTOIDITIS.*

BY C. J. SWAN, M. D.

CHICAGO.

ASSOCIATE PROFESSOR OF DISEASES OF THE EYE AND EAR IN THE HAHNEMANN MEDICAL COLLEGE, CHICAGO.

Of late years the operation for acute inflammation and abscess of the mastoid has become so common as scarcely to call for comment or description. Yet I can remember when some of the most daring surgeons had not the courage to open the mastoid.

Roscoe Conkling's death is easily within the memory of most of us, and his valuable life was lost to his country for want of a surgeon of sufficient daring to perform this operation. The year before I began the study of medicine, less than fifteen years ago, I lost a dear friend, the

*Illinois Homeopathic Medical Association, 1901.

son of an eye-and-ear surgeon living in a city in New York State, because there was not a surgeon in the city who would operate on the mastoid.

As late as 1893 I saw a typical case of acute mastoid abscess in a man of twenty-eight, who was being cared for in a hospital in this city by one of the best nose, throat and ear specialists in the country, yet he allowed the man to die rather than interfere. Subsequently this surgeon began to do mastoid operations and was very successful with them. I think it was in the same year that an interne in one of our hospitals died from an unrecognized case of mastoid abscess. In this last case, if the condition had been recognized, there is no doubt his life would have been saved, but in all the preceding cases the condition was recognized days and weeks before death occurred, yet operative interference was not attempted.

How great a change has been wrought in a few years! To-day there is scarcely an aurist who has not some successful mastoid operations to his credit, and many ear surgeons can count their cases by the hundred. We endeavor not to allow people now-a-days to die for want of an operation on the mastoid.

The operation for acute abscess is much easier, more simple and less dangerous, than that for the cure of chronic suppurative processes in the mastoid cells, but it is not my intention to-day to go into the detail of these complicated operations; for no one can learn much about them without either seeing them done or practicing on the cadaver.

I do not wish to be understood to say that in order to cure, it is necessary to operate in all cases. It is a good deal, I fancy, like the treatment of appendicitis, some cases are cured without operation and some die without operation, and on the other hand many cases are cured by the operation, and some die in spite of it, when it is done too late. So it is in mastoiditis. One must choose the golden middle way.

If the operation is performed early enough and skillfully, there is no chance of a fatal outcome. One rarely hears of

a fatality where the patient has had the benefit of surgical interference and the fatalities are absolutely limited to those cases in which the operation has been delayed too long, has been delayed until the confined pus has broken through its thin retaining wall into the cranial cavity or caused thrombus of the lateral sinus.

It is well known that mastoiditis follows suppurative inflammation of the middle ear, the infection passing from the attic, through the aditus ad antrum into the mastoid antrum and thence into the smaller mastoid cells.

It is not confined to any particular age, although youths are more liable to attack than adults or the elderly.

The symptoms are — increased temperature, pain, tenderness on pressure over the mastoid, the posterior and upper wall of the external canal more or less collapsed, or swollen into the lumen of the canal so as to greatly lessen its diameter. A history of inflammation of the middle ear usually followed by a more or less profuse discharge of pus from the external meatus; impaired hearing.

These symptoms are classic, and one expects to find nearly all of them well marked in a case of acute mastoid abscess.

The case I am about to report lacked several of these guides to diagnosis.

Case. Mrs. G., age 55; an exceedingly robust and healthy woman, who said that the present trouble was the one illness of her whole life. Referred to me through the courtesy of Dr. Owsley Russell, and came for the first time March 15th, 1901, with the following history:

Dec. 24th, about three months previously, she awoke with severe pain in both ears. The left ear discharged after a couple of days, and at the examination it was normal in all respects. In the right ear the hearing continued to be much below normal; there was almost continuous pain, sometimes of a severe and sometimes of a milder form, and occasionally some throbbing. Temperature, March 15th, was 99 1-5 F. There was no swelling or tenderness back of the

ear. The canal was of normal diameter but the inner end was so loaded by the debris of treatment given her by her physicians in Jackson, where her home was, that the membrane could not be seen.

By the end of her next visit to my office I had succeeded in clearing away the macerated epithelium and medicine, and exposed a bulging membrane behind which was plainly to be seen clear serum.

I opened the membrane freely and was rewarded by the escape of about one drop of serum and a little blood. For two or three days after this there was a slight discharge of very thin white pus and some relief from the pain.

Within a few days the pain resumed its old sway, the temperature ranging from normal to $99\frac{1}{2}$ F. The case at this point began to puzzle me somewhat.

After three months of pain there was nothing externally to indicate mastoid abscess. The drum-head looked exactly like a case of otitis media of forty-eight hours' standing, and behaved like it after it was opened.

The slow insidiousness of the trouble; the nature of the discharge, the temperature range, and the fact that the pain was worse at night, made me think of tubercular otitis, so I examined the discharge repeatedly for tubercle bacilli, but found nothing but the white staphylococcus and the influenza germ, both germs so ubiquitous as to rob the discovery of any value.

The patient was now kept upon remedies and local treatment for two weeks, with no improvement. At this time I began to sympathize with the Jackson physician somewhat, as the indications for operation were not all I could wish.

It seemed improbable that pus could be confined in the mastoid cells for nearly four months without breaking out or causing more of a disturbance. There had never been any discharge except what little followed my puncture. There was no swelling in the canal or back of the ear; nor any tenderness. On the other hand, hearing, which had formerly been good, was far below normal; the watch was only heard on contact. There

was pain in and about the ear, for which there was no other assignable cause. There was increased temperature. Upon these three symptoms — impaired hearing, pain and increased temperature, I determined to insist upon operation, but only after carrying the case as far as I dared upon internal and local treatment. Consent was finally given and April first I made the usual Swartze operation, opening down to the antrum and passing my probe from there into the attic.

There was scarcely any pus in the mastoid, but the structure was soft and spongy and was removed with a dull curette. I irrigated thoroughly and packed the wound, leaving free drainage. The next morning and for forty-eight hours thereafter the temperature was normal and the pain had ceased. There was then a sudden rise, the thermometer registering 104° ; this gradually went down to normal. The patient had become very nervous, and as I could find no other cause, attributed the rise in temperature to that. The pain came back to a less degree occasionally, but at the end of three weeks entirely disappeared, hearing became nearly normal, and after keeping the wound open by daily dressing all of this time, I allowed it to close up, and last week my old lady went back to Michigan quite restored in health.

I may add that although I was unable to demonstrate the tubercle bacilli, I am still inclined to believe that the case is a tubercular one.

VENETIAN BUILDING.

The club-feet of the newborn are easy of diagnosis, but attention is necessary, or else light degrees of pes planus or varus will be overlooked simply at a time when correction is marvelously easy. Hernia of the navel is once in a while difficult to diagnosticate, as simple as it would seem it ought to be, but sometimes the folds of the skin are so prominent as to simulate hernia. The safest is the rule given before — treat as though the worst possibility existed.

An Operation for the Radical Cure of Umbilical Hernia.

Dr. W. J. Mayo, of Rochester, read this paper. The extreme attenuation of the recti in advanced cases made muscle transplantation necessary, but under certain conditions he had found that extremely good results could be obtained by an overlapping operation, which he described in detail. The wound was closed in a transverse line rather than from side to side.

Dr. A. J. Ochsner, of Chicago, mentioned three customary methods of closing these lesions, and felt that Mayo's operation was of special use when the atrophy was not too marked.

Dr. De Forrest Willard, of Philadelphia, cited a case in which the patient weighed over five hundred pounds; he had successfully operated through eight inches of fat.

Dr. W. B. Coley, of New York, urged conservatism in very fat cases.

Dr. J. C. Warren, of Boston, spoke of the etiology of umbilical hernia. It might be due to the large fold of fat, which, tugging on the umbilical cicatrix, might predispose to rupture. He suggested the removal of this fold as prophylactic after operation.

Dr. Mayo, in closing, said that he removed as much of the omentum as was extruded.

"Excision of a Part of Three Ribs and a Portion of the Diaphragm for Sarcoma," by Dr. C. B. Porter, of Boston, was read by title.

Fractures and Dislocations of the Spine.

Dr. S. H. Weeks, of Portland, read this paper. Although an exceedingly rare injury, he stated, dislocation of the vertebra without injury did sometimes occur. It was almost invariably found in the lower half of the cervical region, and was usually caused by an extreme hyperflexion. It was rarely in any other direction than forward. The most prominent symptom was paralysis, which usually supervened at once; if not, its advent heralded the approach of degenerations of inflammatory exudations in the cord. The treatment of every case was immediate laminectomy, the surgeon regarding the operation purely as an ex-

ploratory one. The objections which had been raised against this course — hemorrhage, difficulty of exposing the cord, hopeless nature of injury, infection, danger from the anesthetic — were not for a moment to be considered. Whether the dura should be opened was a question more difficult to answer in the spine than in the brain. It should usually be done, but there were certain exceptions; if opened, it should be carefully closed.

Dr. S. J. Mixter, of Boston, favored early operation, even in the cervical region. He did not sew up the dura, feeling that thus better drainage was secured.

Radical Cure of Inguinal and Femoral Hernia, with a Report of Eight Hundred Cases Operated Upon from 1891-1901.

Dr. W. B. Coley, of New York, presented this paper. After dealing with generalizations, Dr. Coley spoke with special reference to inguinal hernia in the male. So perfect had the technique become that nowadays the indications for operation in the young adult were so very broad as practically to include all. He advocated a very slightly modified Bassini operation, and agreed with the gentleman from the Northwest, who so strongly advocated the use of easily absorbable suture material. The use of rubber gloves had reduced the percentage of infection from about four to one-half. In children the indications for operation were fraught with greater limitations. He rarely, if ever, advised operation in a simple case in a child under four years of age. Up to this age they could almost invariably be cured by a suitable support. From four to fourteen, he urged the faithful use of a truss for one year. If at the end of that time there was no cure, he operated. He had operated on one hundred and fifty cases of femoral hernia in women; of his technique he was unable to speak, but his results had been admirable.

The keynote of the treatment of general septic peritonitis must be the relief of the peritoneum and of the obstructed lymph channels, and this can only be done by removal of the septic exudation and subsequent drainage.

SURGICAL ERA

CHAS. ADAMS, M. D., EDITOR

CHICAGO, JUNE, 1901

THE DIAGNOSIS OF SURGICAL DISEASES OF THE KIDNEYS.

W. Edmund Owen, the well-known surgeon and writer of London, in a recent address, calls attention to some of the anatomical associations of the kidneys from a surgical point of view. This address, pointing out as it does the abundant opportunity for error in the diagnosis of surgical diseases of the kidneys, is of more than passing interest to any one practicing renal surgery.

The leading symptom in many kidney cases is pain, and this being subjective is in many instances misleading.

The nerve supply of the kidney is derived from the sympathetic plexus in front of the upper part of the abdominal aorta, and into this plexus run branches of the splanchnics, the pneumogastrics, and also, indirectly, of the spinal nerves. The testis being developed in close association with the kidney, there is an intimate connection between the nerves of the renal plexus and those of the spermatic plexus. Here we have the explanation of the pain in the testicle and cord often felt in connection with renal calculus. We have noted the absence of this symptom in several cases of renal calculus, and would say that even when present it is not always indicative of calculus but may accompany irritation of the renal pelvis from that or other cause.

With an innervation scheme in which medullated and sympathetic nerve filaments are thrown with ganglia into a central pool from which each viscus helps itself, as it were, it can hardly be a matter of surprise if the result does not often work out satisfactorily in a clinical sense.

So long as the viscera supplied by this mixed arrangement are in smooth working order there are no misinterpretations, for there are no sensations, but in the event of derangement confusion may arise and error in diagnosis and treatment result. Nature has done well in protecting the kidneys from trauma, but as Owen says, "Surely there are no members of the body worse treated than they. And when they suffer the other members suffer with them — the heart, the arteries, the brain, the retina — everything." In illustration of the irregular way in which symptoms may occur, Owen cites a case in which the patient had experienced dull pains in the back ten years previous to admission. About five years before he had a severe attack of renal colic on the left side and had passed blood and small calculi on several occasions. For the two years previous to admission, however, the pain had been on the right side, and the patient was firm in the belief that the small calculi passed from time to time had come from the right kidney. Nothing is said in the history of the case as to the presence or absence of tenderness, an extremely important symptom, except that "Objective signs gave no help in the matter of localization." An exploratory operation on the right side showed the right kidney to be larger than normal, but otherwise healthy. About a month later the left kidney was opened and a calculus found. This case is cited by Owen as a conspicuous instance of the untrustworthiness of pain as a subjective symptom in the absence of objective signs. To-day the Roentgen ray, in expert hands, should

make such an error in operation avoidable. Vomiting is noticed with surprising frequency in cases of injury or disease of the kidneys. Owen thinks this an interesting subject for speculation, and says that in all cases of unexplainable or unexplained cases of vomiting the medical man should make a careful examination of the kidney and the urine. Attention is called by our author to the vascular associations of the kidneys, to the "subperitoneal arterial plexus" of Sir William Turner. In this, anastomosis of the renal artery is effected with the phrenic and the lower intercostals and the upper lumbar branches of the aorta by branches sent through the renal fibrous capsule. There is also free anastomosis between the venous plexus of the parietes and that of the kidney. This explains the relief obtained by leeching or cupping the loins or by the application of counter irritants to the same region.

The peritoneal associations of the kidneys must also be considered in determining upon operative procedures. While it is possible under strict asepsis to make total nephrectomies by the transperitoneal route we fully believe that except for large tumors the lumbar operation should be the operation of choice, and in all cases in which any doubt exists before operating as to whether a nephrectomy or a nephrotomy is to be done, there can be no question as to superior safety of the latter. Owen says: "An advantage claimed for the anterior route is that the surgeon can examine both kidneys before determining how he should deal with the one which he has reason for deeming to be diseased. The comparative condition of the kidneys should be determined before operation by the use of ureteral catheterization or the Harris segregator.

Illustrative of the possibility of confusion of symptoms that may exist in con-

nection with disease of the colon, Owen describes at length a case in which the symptoms described by the patient and his attending physician were significant of renal calculus — gravel seventeen years before, frequent micturition, pain in thigh and testis, hematuria and rigidity of the muscles over the left kidney. The kidney was explored and found to be perfectly healthy. The patient died three days after the operation, apparently of exhaustion. The autopsy showed an epithelioma of the descending colon with metastatic nodules in the liver. Ureteral catheterization and the Roentgen ray might have been of service in this case.

In another case given by Owen the patient had been operated on for movable kidney twelve months before coming under his observation. There was no history of symptoms or signs which might lead to such operation, but it had been done by a skilful and prominent surgeon. Examination showed a tumor of the ascending colon which on operation proved to be a columnar epithelioma. Still another case is cited in which a malignant growth of the ascending colon was mistaken for a floating kidney, and another in which renal calculus was diagnosed as disease of the large intestine. Owen says "there must sometimes be a considerable amount of uncertainty in connection with the diagnosis of floating kidney." A case occurring recently in the practice of the writer illustrates this thoroughly. A woman of 59 years, in January, 1901, was attacked by pain running from the ensiform cartilage to the back and accompanied by vomiting. After a few hours the pain settled in the right side and a tumor appeared to right of umbilicus at the site of pain. After persisting for two days the tumor suddenly disappeared after copious urinations. There is more or less pain to be felt at all times in the right loin and a tumor has appeared which is persistent. The pains complained of by the patient run into the groin. There is increased frequency of micturition. Examination

shows a tense fluctuant tumor. It is very tender to touch, smooth in outline, reniform, freely movable. A diagnosis of hydronephrosis was made, and an operation performed with a view of fixing and draining the kidney. The incision was made parallel to the last rib and carried down supposedly to the renal adipose tissue. This was separated and a tumor exposed which was taken for the distended kidney, digital exploration around the tumor showed that the latter was attached to the liver, or, rather, a tongue-like process of the liver which allowed free motion. The wound was carefully inspected, the peritoneum was intact in the anterior portion of it, and no bowel appeared in the cavity opened by penetration of the supposed kidney fat. The tumor was stitched to the fascia, the wound packed with gauze for seventy-two hours and then the tumor incised, giving vent to a pint of bile. The tumor was the gall bladder, and was drained in ordinary fashion. The operation having been made in strict accordance with the established technic for nephrotomy and the patient having made an uneventful recovery, we can not explain the abnormal condition found. Further we have been unable to locate the kidney at all. This case simulated a hydronephrosis very closely.

The close association of the stomach, with the left kidney, must be borne in mind, with the fact that an inflamed or tender left kidney may be painful only when pressure is made upon it by the distended stomach.

In cases of rupture of the kidney, Owen believes that whenever practicable the kidney should be given a chance to heal, practicing resection or nephrectomy only for destructive lesions of the organ. "Circumstances may be such that Nature cannot be entrusted with repairing a ruptured stomach or bladder, but a ruptured kidney may offer her no more serious difficulties than does a torn muscle or a broken bone. All that she demands is a little surgical help and a good deal more surgical trustfulness than (in the case of the damaged kidney) is at the present time apparently bestowed upon her."

ORIGINAL ARTICLES

FREQUENCY AND SIGNIFICANCE OF FLOATING KIDNEY.

W. LOUIS HARTMAN, M. D.

SYRACUSE, N. Y.

(Read before the Surgical and Gynecological Society of the American Institute of Homeopathy, Richfield Springs, N. Y., June, 1901.)

When I was first invited to present a paper before this august body it was a great task to select a subject for your consideration which would be both interesting and instructive, not only to the specialist, but to the general practitioner as well. My experience of recent years bears me out in selecting the above mentioned as being a subject of vast importance to all practitioners of medicine.

I believe the first symptoms of movable kidney are more often mistaken for other maladies than almost any other trouble with which the practitioner deals, as the pains radiating in the abdomen, commonly known as abdominal pains, are very misleading, and often are not referred to the kidney at all, and at the same time this organ is really responsible for all the suffering the patient endures. A great many of these symptoms may be present and the organ not movable, but at the same time responsible for all the suffering, therefore it is very important that we be able to differentiate between the pains caused by movable kidney and those caused by indigestion, biliary colic, appendicitis and other gastrointestinal disturbances. Last, but not least, we must not forget the kidney that has become painful from concentrated urine, produced by an insufficient amount of water taken into the system. Now, the latter condition is usually found in women who drink very little water and are highly neurotic in character. In this condition you will also find the kidney sensitive to pressure. It is also highly important when you find such symptoms present to analyze the urine and ascertain the solid matter, both chemically and microscopically, as such examinations often reveal or differentiate from other troubles. This condition must not be confounded with that of stone in the pelvis of the kidney, or chronic nephri-

tis. Of course, the microscope will reveal this and make differentiation. There is a chance for diagnosis of movable kidney if you will force the patient to drink plenty of water, and if the kidney is not of the movable variety, the patient will improve rapidly; and, by the way, the best way to force patients to drink plenty of water, is to give directions for their medicine to be taken in large quantities of water; specify the amount and then you will be sure of the proper quantity, as often, when it is left to the patients' judgment, they may think they are taking large quantities of water when our judgment would differ from theirs. As I have said before, the majority of movable kidneys will be found in neurotic women as well as those with concentrated condition of urine. You will often find patients in both classes, that is movable kidneys and patients who have concentrated urine, complaining of what is known as kidney-ache; that is, they will complain of pain in the region of the kidney.

Let us first consider the causes of movable kidney. They are as follows: traumatism; loss of abdominal fat; child-birth, tight-lacing, and spinal curvature. The right kidney is more often affected than the left. Movable kidney is more often found in women than in men, by about ninety per cent. The symptoms have a great variation, but as a usual thing almost all cases have some gastro-intestinal disturbance. Some patients will suffer only occasionally with gastro-intestinal disturbances, others will have this continually. You will find intestinal indigestion present in ninety per cent of cases that are of sufficient importance for the patient to seek relief. The patient will complain of a dragging sensation on the affected side, and on palpating the abdomen when the patient is in the right position, you will be able to discover a movable tumor. When palpating a movable kidney, if you make deep pressure, the patient will complain of sickness at the stomach, which will be described as a deathly faint feeling. In examining movable tumors of the abdomen, phantom-tumors may be mistaken for movable kidneys. I have a

case of this sort in mind at the present time. I was called in consultation where it was supposed the patient was suffering with movable kidney, but by close study of the case and repeated examination, the fact revealed a phantom-tumor instead of movable kidney.

When palpating patients for movable kidney, they should be placed in several positions for examination. The erect position is the first one, on the opposite side from that affected; the dorsal last. In the majority of cases when the patient is placed in the dorsal position, the organ will fall back in its normal position.

When examining a patient for movable kidney, we must always be mindful of tumors involving the omentum. These tumors may appear quite movable, and misleading in forming an opinion. Also a distended gall-bladder must be kept in mind, as they often drag down to such an extent and may be mistaken for movable kidney. I saw a case of this several years ago that simulated movable kidney, the most apparent part of it was dragged down below the umbilicus. A case brought to my attention within the last year was very interesting to me, and very misleading. The right kidney was found below and slightly to the right of the umbilicus and was perfectly anchored in this position. This, no doubt, was congenital, for it had all its attachments and seemed as perfectly imbedded as a kidney in its normal condition. Sometimes the pain will be found most severe in patients during menstruation, therefore this malady must not be mistaken for some form of dysmenorrhea. On the other hand, you will find patients with movable kidney who complain of pain only during menstruation, therefore you can readily see how we may be mistaken in our diagnosis if proper care is not given to physical inspection when examining patients complaining of some uterine disorder; therefore, it is imperative that we make an examination for this affection if we are not positive that our diagnosis is correct to the extent of excluding all other troubles from that of uterine affection. I have found patients suffering with movable kidney who only

complained of pain while lying down, and then only occasionally, but with this class of patients pain will be paroxysmal, of short duration and simulating acute indigestion. In one patient I was called to treat, the attack would come after the patient had been asleep for some time. This I believe was due to the kidney getting out of place and the ureter being sufficiently twisted, thus preventing the flow of urine from the kidney into the bladder, and over-distending the ureter. The reason of this conclusion is that the pain grew less gradually, not all at once, as it usually does when there is a kink in the ureter.

The majority of cases complain of a heavy, dragging sensation, becoming easily fatigued, and a marked nervous state most of the time. Often a hysterical patient will bear a great deal of scrutiny so as not to mislead one in one's conclusions.

We are told that at times both kidneys are movable, but in my experience I have never found such a case; however, our best authorities hold that this may be a fact. Very often we find movable kidneys that have no significance whatever. Of course, those cases are quite rare, and the majority of them go undiagnosed.

The treatment of these cases is always mechanical, either by pressure or by operative procedure. The great trouble to be found with the pressure treatment is that so many times you will find the organ very sensitive to pressure, and this class of patients being of a neurotic type every pain is usually exaggerated, but if a belt can be worn with comfort, I would not advise anchoring the kidney, as the effort is so often fruitless, which is both detrimental to the surgeon as well as the patient. Often it is impossible to anchor one of these organs and have it stay "put."

Our intentions are always good, but at times our results are disastrous. Now, this operation is not one of high mortality. In fact, when it is properly done and there is no disease of the organ, we should have no mortality, but authorities tell us there is a mortality of about three per cent. Where well directed efforts have been made in aggravated cases and

we have made a failure, I believe the best procedure and one I should always recommend, would be the removal of the offending body.

Now, just one word of caution in removing a movable kidney — be sure you have a second kidney. Of course, cases with only one kidney do not occur very often, as statistics show that it is only about one time in four thousand that there is only one kidney present, but it is not pleasant to have that four thousandth case fall to our lot; therefore, I would recommend to first open the abdomen for the purpose of exploring to make sure that the patient has two kidneys, then close the anterior wound and proceed to remove the organ posteriorly. In anchoring this organ my experience has been that better success will be obtained by splitting the capsule and drawing the cortex next to the muscle and allowing it to heal in that way.

As to ligatures, most of our best authorities advise silk, but my experience has been that silk is not the most suitable to use, as it was but a short time ago I was obliged to remove a silk ligature which had been used to anchor a kidney some four years ago, suppuration having taken place and a sinus formed. Cat-gut hardened in some of the various ways I have found very unsatisfactory. In using the chromicized variety, I would have the solution in which it is prepared a very weak one, so that absorption will take place a little more readily than the ordinary chromicized gut. If you do not feel safe in using this, another way I have tried with success is to carry the silk-worm gut through all the layers, deep down into the cortex of the kidney, and allow it to remain from five to seven weeks, then you will be able to remove it from the outside without any trouble.

It is not necessary to use drainage in these cases if you have the wound thoroughly dry before closing.

Now, one word as to after-treatment, that is, after you have allowed your patient to leave the bed. I always advise a well-fitted pad to be worn at least six months after the operation. This will give very little inconvenience and be of great service in holding the organ in

place until the adhesions have thoroughly formed, and the tissues have had an opportunity to contract and regain their former power of resistance. This pad should always be applied before the patient is allowed to arise in the morning. They should never be allowed to rise on their feet until the pad is applied.

601 WARREN STREET.

SELECTED

Hepatic Abscess of Amoebic Origin.

Asst. Surgeon C. R. Darnall, U. S. A. (N. Y. Med. Jour., Feb. 9, 1901), reports four cases of amoebic abscess of the liver.

Our intimate relations recently acquired with tropical countries will add very largely in variety to the clinical experience of the army surgeon, and we may expect a corresponding increase in the literature of tropical disease.

Of the four cases, two died. We cull the following interesting facts from the concluding remarks of Dr. Darnall:—

In all the cases the *Amoeba coli* were present in the contents of the abscess or its walls.

In two cases the amoeba was found in the stools, amoebic dysentery being present, but in the other two cases there was no history of diarrhea or dysentery, recent or remote, though both patients had been in the tropics for more than a year.

So far as could be ascertained by microscopical examination no other organisms than the amoeba were in the pus from the abscess cavity.

Fever of irregular type was present in all the cases. The highest recorded temperature was 103.8° F. The average maximum in the four cases was about 102.5° F. Chills were absent. Pain in the shoulder and in the right hypochondriac region, tenderness over the lower intercostal spaces and at the costal border on the right side and emaciation were present in all the cases. Nocturnal sweats, occurring usually after midnight, affected two of the four patients. Leucocytosis was present to a slight degree in all cases. There was no nausea or vomiting nor appreciable jaundice in any, but the appetite was excellent in all cases.

In the two fatal cases there was a pericardial effusion of about six ounces. In all the cases the heart's action was rapid and weak and the pulse very compressible. The urine was normal in quantity and quality. The treatment is entirely operative and operation should be performed so soon as the diagnosis is made.—M.

Anastomosis of Uretero with Intestine.

Peterson of Chicago (Medical News, No. 1439, 1900) gives an abstract of the results of study of the experimental work done in this direction and reaches the following general conclusions:

1. The primary mortality of uretero-intestinal anastomosis both in experimental work on animals and in man is exceedingly high.

2. The best technic is that requiring the least amount of suturing of the ureters themselves.

3. All efforts to prevent ascending renal infection in animals or in man where the ureter has been implanted without its vesical orifice have proved futile.

4. It is impossible to determine in advance the extent of the infection which will result from uretero-intestinal anastomosis. The patient may die in a few days of a pyemia or in a short time of pyelonephritis or, in rare cases, may recover from the infection with resulting contracted kidneys.

5. Hence the operation is unjustifiable, either for the purpose of making the patient more comfortable, as in exstrophy of the bladder, vesico-vaginal or uretero-vaginal fistula, or for malignant disease of the bladder.

6. The results of uretero-intestinal anastomosis through the formation of vesicorectal fistulae have not been favorable up to the present time.

7. The success of Frank's experimental work in vesicorectal anastomosis justifies the expectation that the future results of this operation will be more satisfactory.

8. The primary mortality of uretero-trigono-intestinal anastomosis is low for an operation of this magnitude.

9. While it cannot be denied that ascending renal infection may occur after this operation, the infection as a rule is of such a type that the chances of the individual's overcoming it are good.

10. Hence, the operation of implanting the vesical flap with its ureteral orifices into the intestine is a justifiable surgical procedure.

11. There is no valve guarding the vesico-ureteral orifice; nor does the circular muscle-layer of the ureter nor the bladder-muscles themselves act as a sphincter.

12. It has been abundantly demonstrated by experimental and clinical work that the rectum tolerates the presence of urine and acts as a good substitute for the bladder and that good control over the anal sphincter will be maintained.

A New Method of Sterilizing Catgut.

Wesselhoeft of Boston in the New England Medical Gazette advocates the use of catgut for sutures and ligatures and suggests an efficient method for sterilization. The catgut is cut into convenient lengths, sealed in separate envelopes, and sterilized in absolute alcohol at the boiling point of water. A special form of sterilizer is used, the envelopes containing the catgut are placed in a wire basket in the apparatus, covered with absolute alcohol and the closed sterilizer placed in boiling water for one hour. The expansion of the alcohol under the boiling results in a pressure of twenty-five pounds to the inch, sufficient to force the alcohol through the gut. At the end of the hour the sterilizer is placed in cold water for a few minutes. After cooling and subsequent drying in a towel the gut is ready for use. Absolute alcohol must be used, for any water in the alcohol will ruin the gut. The apparatus is simple and no doubt efficient. It may be used for kangaroo tendon.

The Roentgen Rays.

Carl Beck, of New York (Jour. Am. Med. Ass., Jan. 5th, 1901), gives some very valuable information on the likelihood of misinterpretation of the

Roentgen ray pictures. He shows clearly how the position of the tube and the plane on which the picture is made may conceal a line of fracture in a very clear clinical case. He insists on the absolute necessity for two or more pictures of a part in order to be certain of the existing condition. The comparison of the picture with one of the normal member is also a great aid, as individual peculiarities or deformities may exist and be mistaken for fracture or injury, unless the true condition be determined by a comparison with the picture of the corresponding part. Again, in the case of children, a great deal of misinterpretation may occur unless a careful study be made of the time of union of the epiphyses and diaphyses of the various bones. This he takes up very thoroughly, stating the time anatomists usually give and the time the Roentgen pictures have shown to be correct, for complete union of epiphysis and diaphysis in the various bones. This feature alone is one demanding great care and careful study to gain a correct knowledge of what is due to injury and what should be found in the natural process of ossification. As a whole, he shows very clearly and minutely how what may appear to be a very carefully made and perfect picture of a part may fail entirely to show the true condition, or, on the other hand, may make gross misrepresentations of a natural and normal condition. His observations demonstrate clearly that the use of the Roentgen rays to be of value must be made a careful study and should be only in the hands of those who have learned by experience what is possible and probable unless the apparatus be handled with every care to avoid misinterpretation." — M.

Suprarenal Extract as a Hemostatic.

In the Med. Record of Feb. 9, 1901, W. H. Bates, of New York, furnishes a very interesting and instructive paper on the use of the Extract of the suprarenal capsule as a hemostatic. After six years of use he considers it the most powerful known astringent and hemostatic.

A great deal depends on the preparation employed. In local use a solution

is best, one part of the dried and powdered gland to ten parts of water. It is very important that the solution be made fresh, as it rapidly spoils, sometimes in two hours.

For internal administration the dried and powdered gland, in doses from iiij gr. to x gr. t. i. d. is employed, and may be used more frequently.

Its local use is especially satisfactory in eye, ear and nose work, making operations here almost bloodless as well as averting the possibility of secondary hemorrhage.

In epistaxis its success is very pronounced and immediate. He gives a number of cases which have been reported on the use of the drug as a hemostatic. One case of post-partum hemorrhage, wherein the uterus was packed with a cotton tampon soaked in a saturated solution of the extract. Ten grains of the powdered gland were given internally at same time and a second dose half an hour later, when the tampon was removed. The hemorrhage ceased at once and the patient made a rapid recovery.

In conclusion he sums up as follows:
1. The supra-renal extract is the most powerful known hemostatic and has, when properly used, no objectionable properties.

2. When it is used locally hemorrhage from mucous membrane can always be controlled.

3. The internal use of the extract as a hemostatic is efficient in some cases.

4. The supra-renal extract, when it controls hemorrhage locally or by internal administration, does so in less than one minute. — M.

In cases of esophageal stricture always examine carefully for aneurismal trouble of the aorta, as rough passing of instruments in such cases has led to rupture and sudden death. If the trouble should be due to malignant disease, an instrument might be forced through the esophageal walls. If, therefore, it does not pass quite readily, it is best to desist and perform a gastrotomy if necessary, in order to feed the patient.

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AMERICAN INSTITUTE—1902.

At its meeting at Richfield Springs, June 18 to 22, 1901, the American Institute of Homeopathy elected the following new officers:

President—

James C. Wood, M. D.,
Cleveland, Ohio.

First Vice-President—

Edward Beecher Hooker, M. D.,
Hartford, Conn.

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Minneapolis, Minn.

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A. C. Cowperthwaite, M. D.,
Chicago.

The selection of the next place of meeting of the Institute was left to be made by the in-coming Executive Committee. The result of their choice will be announced some time after the officers-elect have entered upon the duties of their office, which will be January 1st, 1902.

CHAIRMEN OF SECTIONS.

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Minneapolis.

O. O. & L.—Dr. E. H. Linnell.
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Journalistic Enterprise.

The Chicago Tribune of June 26 published an excellent likeness of the President-elect of the American Institute of Homeopathy. The illustration was accompanied by some comments of affairs at Richfield which gave a peculiar turn to events. Our enterprising Chicago daily copied the picture, and the accompanying text, from the Cleveland Plain-Dealer, and the latter paper published them before the new President had returned from the scene of his election.

Dr. Q. O. Sutherland, of Janesville, Wis., at the joint meeting of the three State medical societies, at Waukesha, read a paper on "National Control of the Practice of Medicine."

An Explanation.

Owing to prolonged absence from Chicago on the part of the editor of the Medical Era, there is a month's delay in the publication of the series. This will now be remedied as promptly as can be done.



That where there's a will there's a way to break it.

That chloroform is the world's greatest composer.

That many a man is lucky if he gets milk of the first water.

That medicine is the noblest of professions but the meanest of trades.

That the man who knows his own mind may not know so very much after all.

That a man doesn't feel very much inflated when he has just been blown up.

That the man who stepped into a coal-hole started out to attend a fall opening.

That the most unsatisfactory thing in the world is to kiss a girl through her veil.

That people don't care what your father was, but they are mighty particular about your mother.

That a Georgia farmer made \$100 from an acre of watermelons and the nearest doctor made \$200 from the same acre.

That a thorn in the bush is worth two in the hand.

That in ancient times collars were ruff on the neck.

That it's better late than never but never be late.

That it's an ill wind that blows your hat in the mud.

That when the outlook is not good you should try the uplook.

That the man who is in the right doesn't have to get mad.

That about two-thirds of what one positively knows is not so.

That any man who will look wise and keep his mouth shut may become great.

That you should never borrow unless you are dead sure that you are good at paying back.

That a doctor should always appear to be doing something, especially when there is nothing to do.

MEDICAL ERA

CH. GATCHELL, M. D., EDITOR

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NO. 7

PROGRESS OF THERAPEUTICS.

At the recent meeting of the American Therapeutic Society, held at Washington, D. C., Dr. Reynold W. Wilcox, of New York, presented a review of the year's work in therapeutics which conveys in a few lines interesting and important facts, for a knowledge of which one would have to search the pages of much periodical literature. The article is published in *American Medicine*, Vol. II., No. 3.

We think it well worth while to give to our readers excerpts from Dr. Wilcox's paper. Much has been written of late of the use of the electric light in various ways as a therapeutic agent. This article gives a concise resume of the results so far attained.

Various authors—Paulson, Rand, Gomberg—have studied the electric light bath. They find that it is the most satisfactory and efficient of all methods for inducing perspiration, inasmuch as it is a direct stimulant to the glands. Perspiration appears in from three to five minutes, even when the temperature of the air surrounding the patient is not above 85° F. That this bath is a powerful means of calorification is shown by the fact that the rectal temperature may rise to 103° F. or even higher in the bath. The peculiar value of the electric light bath is due to its efficiency as a source of radiant energy which is not communicated to the skin by convection, for the skin as well as the air is to a large extent transparent to radiant heat, and the same is true of all the living tissues. Thus it is true that the heat from the electric light penetrates the body just as it would penetrate any other transparent or semitransparent medium. This bath has also the advantage that it encourages heat elimination by promoting free perspiration. There is also the excretion of effete matters which accompanies free perspiration, and with the elevated temperature of the blood there is a quickening of all the vital processes. It is claimed that this method is especially valuable in the treatment of cardiac disease and in diabetes

where prolonged sweating measures cannot be employed without more or less risk. The penetrating nature of the heat of the electric light bath stimulates oxidation of the residual tissues, and this hastens the disappearance of the redundant fat in obesity. In the dropsy associated with either cardiac or renal disease, in the toxemias of chronic dyspepsia, in chronic malaria, syphilis, chronic rheumatic affections, anemia, and in various other disorders excellent results have been achieved. A local application for fifteen or twenty minutes, followed by the application of an ice compress, is almost a panacea for the pain of sciatica. Since it is evidently a nerve tonic, the excellent results of its use in the treatment of the symptom-complex known as neurasthenia, particularly when due to toxemia, rest on a solid foundation.

Sequeira reports on the Finzen light treatment. The principles on which it is based are: (1) Light is a germicide. Its bactericidal action is due to the violet and ultraviolet rays—the so-called chemical rays—of the spectrum. This effect is increased if the light is concentrated by lenses made of rock crystal. The red rays are absorbed in passing through a blue medium (copper sulfate solution). (2) The chemical rays of light have an irritant effect on the skin. (3) The light has a certain penetrative power which is much greater if the skin be anemic. The latter is produced by pressure. To prevent marked inflammation, the apparatus must be cooled by water. The results in lupus have been remarkably satisfactory, but in lupus erythematosus they have not been so striking; in alopecia areata they are encouraging. Epithelioma of the skin has been markedly benefited, while rodent ulcer is difficult to treat. It is suggested that leprosy might also prove amenable to this method.

Curative effects of the Roentgen rays have been claimed by Clark in lupus, the low tube being employed, treatment being given every fourth day for fifteen to twenty minutes. The tube should be put within a couple of inches of the diseased area, which should be exposed through an opening of the same size in a lead mask one-eighth of an inch thick. The various forms of tuberculosis which are said to be

benefited by this treatment certainly require more time for absolute demonstration.

Stern has made a thorough investigation of adonidin and believes that this remedy, notwithstanding its speedy and vigorous action, can be safely administered for various conditions when digitalis, if prescribed at all, should be given only with the utmost caution. He especially refers to fatty degeneration of the heart, pericarditis, simple and compensatory hypertrophy, and certain atheromatous conditions. In rapidity of action it almost equals nitroglycerin, and surpasses by far digitalis, digitalin, digitoxin, caffeine, spartein, strophanthus, convallaria and convallamarin. In certainty it equals nitroglycerin and surpasses caffeine, spartein, convallamarin, strophanthus and digitalis or its glucosids. In permanency, although no cumulative effects were ever noted, it surpasses nitroglycerin, caffeine, convallamarin, spartein, digitalis, digitalin and digitoxin. As a physiologic diuretic it is decidedly inferior to caffeine, strophanthus, convallamarin and spartein. In certain affections of the kidney and in pyretic conditions its diuretic effect is more pronounced, which is probably due to increased arterial tension. Its greatest diuretic effect is exhibited in conditions accompanied by dropsy and low arterial tension. The dose varies from one-thirtieth to one-tenth of a grain two or three times a day. One-sixth of a grain administered in any form influences edematous conditions and produces diuresis, especially when arterial tension is low. The next step toward practical employment of this remedy is the elimination of its irritant properties.

Arnold, and Wood, Jr., after a careful laboratory study conclude that: (1) Digitalin and digitoxin each represent the full circulatory powers of digitalis; (2) digitalis, digitalin and digitoxin stimulate the cardioinhibitory mechanism both centrally and peripherally. In larger doses they paralyze the intrinsic cardioinhibitory apparatus; (3) they all cause a rise of blood-pressure by stimulating the heart and constricting the blood vessels; (4) very large doses paralyze the heart muscle in the mammal, the heart stopping in diastole; (5) digitoxin should not be recommended for human medication on account of its irritant action, which makes it liable to upset the stomach when given by the mouth or to cause abscesses when given hypodermatically; and on account of its insolubility which causes it to be slowly absorbed and irregularly eliminated, having a marked tendency to cumulative action.

Carbolic acid in any strength should be included in the list of drugs which can only be

procured by a prescription from a physician. Kodman and others have reported recoveries from the ingestion of carbolic acid when alcohol has been employed as an antidote. Absolute alcohol should be administered at once, and if the patient is unconscious the stomach tube should be employed. Promptness is a strong element in success. Since sixty grains or more of absolute carbolic acid almost always proves fatal and the drug can be so easily obtained, the knowledge of the antidotal power of alcohol should be as widely disseminated as possible.

Kemp reports that a saline enteroclysis at a temperature of 110° F. produces the following effects: (1) An immediate increase in arterial tension; (2) at the expiration of ten minutes this stimulation seems to reach its maximum point; arterial tension remains unchanged; (3) increase of renal secretion begins after ten minutes, coincident with the increased arterial tension; (4) at the same time there is an increase of blood and body temperature; (5) a second marked increase of renal secretion occurs at the end of twenty minutes, due to absorption from the intestine.

It has seemed possible that from the fad known as Eddyism, as from other fads, some information which might be of benefit to humanity could be evolved. But, this apparently emasculated Brahminism, with all apology to classic Brahminism, has become such a jumble of cacophonous verbiage dissociated from all logical ideas, that emptiness of the mind is necessary for its reception. Apparently the same people—those who cannot be educated to the point of learning—are embracing this, who have been devoted to other bizarre theories. It would seem that from the practice of Eddyism, two benefits might be derived: one, that the natural history of untreated disease might be studied, and then we would be in better position to demonstrate the benefit of our efforts; the second would be our riddance of those patients whom we cannot cure—those who have nothing the matter with them—and the numerous paranoiacs and hypochondriacs. Thus far the opportunities for observation have been so scanty that nothing of importance has been acquired.

As a system of therapeutics "Christian Science" would have died ere this if it had not been put forth as a religion, and it would have died as a religion if it had not been put forward as a system of therapeutics. — Dr. Buckley.

AMERICAN INSTITUTE.

It is somewhat early to be looking forward to the next meeting of our great National organization, and yet it is well to keep in mind the fact that it will be one of the most important that there has been in a great many years. It will mark a new era in its history, for the reason that the constitution and by-laws are to be revised and it is to be expected that some of the changes will be of a radical nature. The new conditions created by increasing the number of auxiliary societies, and yet bringing them into such affiliation with the Institute that they shall be a vital part of the parent organization, while internally self-governing, involves important problems calling for the highest degree of wisdom and the profoundest judgment.

That there are unselfish men in the Institute capable of dealing with these problems with an eye single to the good of the Institute, and the greatest good of the greatest number, we may rest well assured. In the end the majority is always right.

The statement made in the last issue of *The Medical Era*, that the incoming executive committee would upon coming into office render a decision in the matter of the place of next meeting, was not correct. The choice will be made and announced by the month of October, 1901.

THE OVIDUCT.

The series of articles begun in this number of the *Medical Era*, by Byron Robinson, M. D., on the physiology of the oviduct, are worthy of the attention of every student of medicine. The matter is the result of original experiments and observations, and the illustrations, likewise, are original, all being drawn by the author from his own dissections.

We commend the subject to our readers, for it will present new facts in the physiology of this important part of the body.

ORIGINAL ARTICLES

THE OVIDUCT.

II. PHYSIOLOGY.

BY BYRON ROBINSON, B. S., M. D.
CHICAGO.

The general purpose of the oviduct is to transport ova from the ovary to the cavum uteri. It is the duct for the ovarian gland. Its anatomic structure is so arranged that the complicated function of floating an ovum into the uterus is produced by many factors which may be discussed under various heads. The recognized factors are based on comparative observations of lower animals. The author bases these labors on numerous examinations of the lower animals and man. The chief investigations were in pigs, cows, sheep, dogs, horse, cat, monkey, rabbit, guinea pig, fish.

The following are the main physiologic factors in ova transportation, viz.:

1—The periodic congestion of the genitals, stimulation of the automatic menstrual ganglia by extra blood.

2—The cilia of the oviducal mucosa whip continually toward the uterus, distalward, not only forcing the ova distalward but also creating a fluid current.

3—The congestion induces the endosalpinx to secrete a fluid which makes the oviduct a canal to float the ovum distalward.

4—Congestion induces continual oviducal peristalsis which forces the ova distalward.

5—The shortening of the fimbria ovarica which induces the infundibulum to apply its mucous surface to the ovary.

6—The contraction of the muscular processes in the ligamentum latum enhances the peristalsis.

7—The congestion induces the secretion of mucus and glues the infundibulum on the surface of the ovary.

8—Intra-abdominal pressure aids the distal progress of the ova.

9—The enlarging of the ovum in approaching the infundibulum.

10—Secretion of the endosalpinx produces a fluid medium adjacent to the proximal oviducal end and the cilia of the

fimbria induces a current toward the abdominal ostium.

11—Funnel shape of the oviduct enhances its power to secure movum.

12—Force of gravity.

13—The oviduct has an import (spermatozoa) and export (ova) service. It is

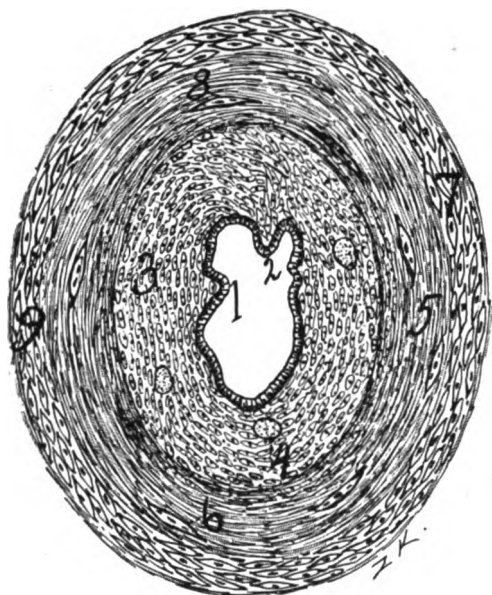


Fig. 1.—(Author.)

Fig. 1. Oviduct (human) at the junction of endometrium and endosalpinx, i. e., at the zone of atypical mucosa. 1 and 2. Point to the epithelia, which is uneven and yet does not show a utricular gland appearance nor atypical endosalpingeal fold. 3. Subepithelial tissue of the atypical zone of mucosa. 4. Points to one of the numerous large blood vessels. 5. Points to the powerful, large circular muscularis of the oviduct, the myosalpinx. 6 and 8. Point to longitudinal muscular bundles distributed irregularly throughout the myosalpinx, but mainly in two layers, one located internally and one located externally in the circular muscularis. 9 and 7. Indicate the fibrous layer, or tunica fibrosa, which is surrounded by the peritoneum.

The four great tunics of the oviduct are plain in this cut, viz.: (a) endosalpingeal-endometrial zone (atypical), (b) myosalpinx, (c) tunica fibrosa, and (d) peritoneum. This cut shows that the exact point of the beginning and ending of the endometrium and endosalpinx is indefinite and that they merge into each other.

analogous to the vas deferens in the male. The spermatozoa pass through the oviduct proximalward, while the ova pass through it distalward.

14—The oviduct is a temporary (or permanent) depot of conception.

The oviduct has three general physiologic offices to fulfil, viz.: (a) to secure and transport the ovum (distalward) to the cavity of the uterus; (b) to conduct spermatozoa proximalward; (c) to serve as a temporary (or permanent) depot of conception.

The oviduct was originally the ureter for the pronephros or head kidney, and hence conducted urine. As nature discards waste the oviduct later was utilized as a transporter of ova.

The physiology of the oviducal tunics are: The perisalpinx secretes fluid. The tunica fibrosa serves as an elastic bed to distribute nerves and vessels, and acts as a buffer against trauma, an expanding and contracting bed.

The endosalpinx secretes fluid and its cilia whip a fluid current distalward.

The muscular tunics of the oviduct perform the following functions, viz.: (a) Direct circular contraction of the oviducal lumen by the great pericircular or ring muscle; (b) control of blood-supply by the outer and inner oblique coats; (c) movements of the mucal folds by the subepithelial muscles, circular and longitudinal. Antagonistic contraction of muscles sufficient to produce peristalsis.

The Periodic Congestion of the Oviduct.

The periodic congestion of the oviduct is one of the important means of ova transportation. This stimulates the automatic menstrual ganglia, and consequently the oviduct, to muscular and secretory activity.

(a) The congestion contracts or shortens the fimbria ovarica and gradually draws the infundiculum with its smaller fimbria over the surface of the ovary. This action enables the fimbria to secure an ovum if it rupture within the field of the ovary enclosed by the infundibulum.

(b) Congestion induces secretion of sero-mucus fluid of the endosalpinx. The presence of excessive fluid in the oviducal lumen acts as a foreign body, a

stimulant, maintaining persistent peristalsis. The fluid serves as a canal to float distalward the ovum.

(c) Congestion stimulates to action the muscles of the mesosalpinx and ligamentum latum which aids the peristalsis in the myosalpinx.

(d) Congestion bathes the anatomic menstrual ganglia with excessive fresh blood which invigorates and hastens the action of the cilia on the epithelia of the endosalpinx. Excessive activity of the cilia increase the force and rapidity of the fluid stream toward the uterus, floating the ova with it.

(e) Congestion increases the secretion of the perisalpinx and thus facilitates the peristalsis and movements of the oviduct among adjacent viscera.

(f) Congestion increases the fluid action in the vagina, endometrium and endosalpinx, highly facilitating the progress by fluid medium of the spermatozoa to the oviducal ampulla. The spermatozoa could travel slowly only and with difficulty over a dry mucosa. Congestion facilitates import genital service.

(g) Congestion is the chief factor (reproductive or infective) in export and import genital service. It is the basic cause of (a) excessive oviducal secretion; (b) excessive peristalsis; (c) excessive ciliary action; (d) contraction of the fimbria ovarica; (e) excessive secretion of the perisalpinx and all of the automatic menstrual ganglia. The fluid secretion producing a canal or water-way especially for any kind of export or import genital service.

A remarkable circumstance in the generative life of mammalia is that ovulation and their transportation through the oviduct are coincident with oestrus or rut. Environments, customs, and seasons have changed this matter in the human, for, in homo marked oestrus is wanting. Although the capacity for human impregnation is greatest near to menstruation (on account of congestion, maturing or rupturing an ovum) yet there is no period at which the human female can be shown to be positively incapable of conception during reproductive life.

Erection of the Oviduct During Menstruation.

Erection of the oviduct during menstruation has been advocated by a few writers (as Milroy).

The subject of erection in the infundibulum in menstruation is thus explained by the infundibulum spreading out like a bell or umbrella and the erecting of the individual fimbriae through congestion and edema. The oviduct, though especially rich in vessels, and particularly at the pavilion, does not possess erectile (cavernous) tissue. It is true, congestion and edema unfolds and stiffens the fimbriae

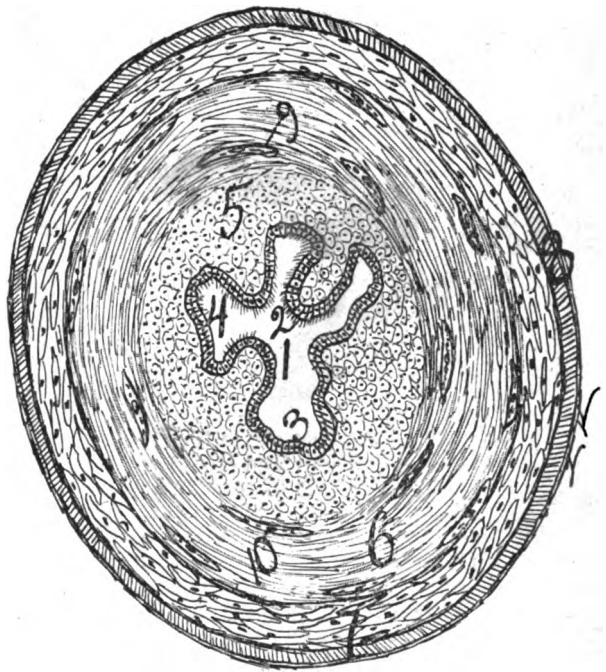


Fig. 2.—(Author.)

Fig. 2. Intramural segment of human oviduct, secured by serial sections. It is the first section which shows distinct endosalpingeal folds. 1. Oviducal lumen. 2. Stands at the mouth of what might be viewed as a gland—it is an epithelial pouch. 3 and 4. Also might be viewed as glands. 5. Endosalpinx, subepithelial tissue. 6. Circular muscularis of the myosalpinx. 9 and 10. Point to the bundles of longitudinal muscles located chiefly at the internal and external parts of the circular layer. 7. Tunica fibrosa. 8. The peritoneum. Note the four tunics of the oviduct.

and makes them appear erected, which is still further enhanced by the creased eversion of the fimbriae into the peritoneal cavity and consequent increase of infundibulum surface. This is congestion (and edema) and not erection. In this work we reject the idea that the oviduct pos-

CILIARY MOTION.

Ciliary Motion of the Epithelia of the Endosalpinx Aids Ova Transportation

and is perhaps the most essential factor. The cilia are essential constituents of the epithelia in the endosalpinx and their

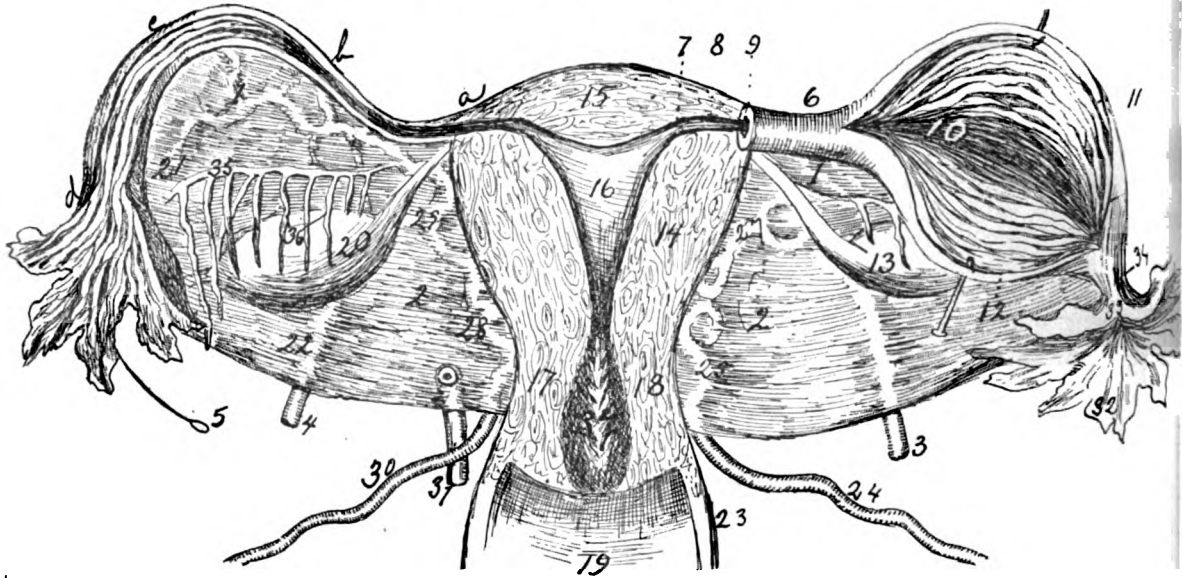


Fig. 3.—(Author.)

Fig. 3. This cut to illustrate the internal genitals, especially the endosalpinx, receptaculum seminis, and the circulation. Posterior view. 1, 1. Mesosalpinx. 2, 2. Mesometrium. 3 and 4. Round ligaments. 5. Hydatis of Morgagni. 6. Isthmus of oviduct. 7. Junction of ostium uterinum and intramural segment of the oviduct. 8. Intramural segment of oviduct. 9. Junction of intramural segment of isthmus. 10. Cavity of ampulla, showing the endosalpinx. It is the receptaculum seminis. 11. Ampullar wall. 12. Wall of oviduct drawn by hook. 13. Ovary and its ligament. 14. Myometrium corporeal. 15. Fundal myometrium. 16. Cavum uteri. 17 and 18. Cervical myometrium. 19. Vault of vagina. 20. Ovary. 21. Artery in mesosalpinx. 22. Mesometrium. 23. Vagina. 24 and 30. Uterine artery. 25 and 27, 28 and 29. The two uterine arteries coursing close to the uterus.

21, 29, 28 and 30. Represents the tortuous segment of the utero-ovarian vascular circle, the genital vascular circle. 31. Ureter, which always passes distal to the uterine artery. 32. Fimbriae. 33. Ostium abdominale oviducts. 34. Abdominal oviducal sphincter. 35. Ureter of mesonephros, or Gartner's duct. 36. Parallel tubules of mesonephros. 37. Canalis cervicis.

sesses the anatomic character of an erectile body. The oviducal changes are explained by rich vascularity, congestion and decongestion, endosalpingial secretion and myometrial rhythm due to excessive nourishing blood bathing the automatic menstrual ganglia.

presence and movements in the oviduct exists at the end of fetal life. The ciliary motion of the oviduct from proximal to distal end was first observed in the rabbit, and finally in other animals, as amphibians and birds. John Miller, Valentine, Purkempie and Mayer aided to found the

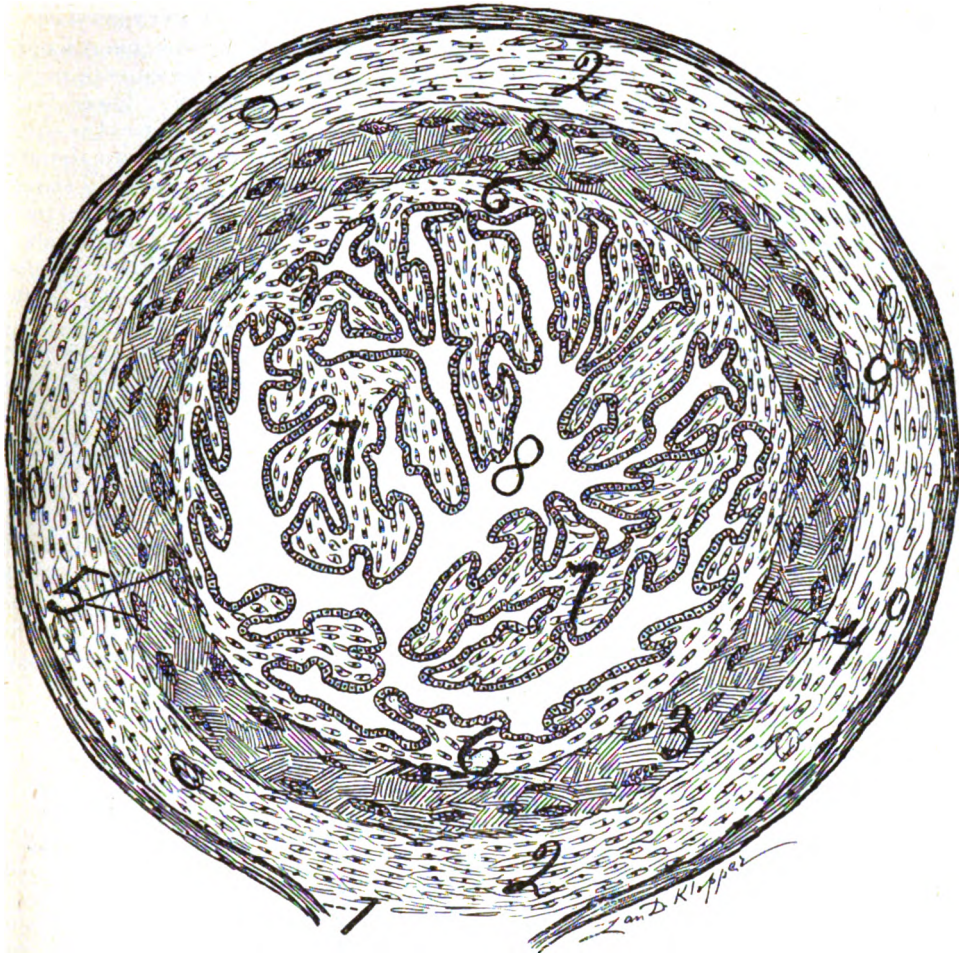


Fig. 4.—(Author.)

FIG. 4. SECTION OF HUMAN OVIDUCT IN THE AMPULLA, SHOWING THE FOUR COATS—PERISALPINX, FIBRO-SALPINX, MYOSALPINX AND ENDOSALPINX.

1. Perisalpinx. 2, 2. Fibro-salpinx. 3, 3. Circular myosalpinx. 4 and 5. Longitudinal myosalpinx. 6, 6. Fibrous tissue supporting—practically two layers. 7 and 8. The endosalpinx, with its major and minor mucal folds. 9. Shows blood vessels which course in the fibro-salpinx.

opinion that from and after birth the cilia created a fluid stream from ostium abdominale to ostium uterinum, and Becker added the idea that a similar fluid stream of the serosa adjacent to ostium abdominale existed forcing the ovum in the direction of the oviduct. The serous fluid stream toward the oviduct only occurs in lower animals (which perhaps possesses ciliated epithelia in the peritoneum peri-

odically) for my experiments distinctly demonstrate that a fluid stream exists in mammals' peritoneum, directed toward the diaphragm.

The congestion in man, as the menstruation hastens the ciliary motion and is enabled by the excessive secretion from the endosalpinx (especially at the fimbriae) and the perisalpinx to secure or whip a fluid stream in the oviduct toward

the uterus. Thiry made the important discovery that in female frogs shortly before the breeding season the peritoneum adjacent to the ostium abdominale becomes covered in radiating streaks with ciliated epithelia which is whipped toward the ostium. Thiry placed pigment on the ciliated peritoneal surface and found that it was whipped to the ostium abdominale and finally through the oviduct. In mammals the ciliated periodic peritoneal surface fails. Pinner injected colored matter, pus, etc., suspended in fluid in the peritoneum of rabbits and found the particles two and one-half to three hours subsequently in the vagina. This appeared to demonstrate a peritoneal fluid stream toward the ostium abdominale, but particles floating about the wide fimbriae infundibulum might easily be entrapped by the vigorously moving cilia on the fimbriae and floated distally in the oviducal water-way. The movements of the abdominal viscera, diaphragmatic and respiratory movements, force of gravity, upright position, voluntary movements of the animal, increase of peritoneal fluid from irritation and capillary attraction, must all be considered, as Heil and August Martin note.

Lode injected the eggs from *ascaris lumbricoides* in the peritoneum of rabbits. After ten hours he found the eggs in the middle of the oviduct, but could find none in the peritoneal cavity. This would indicate the abdominal ostium is a certain apparatus to secure ova. The eggs of *ascaris lumbricoides* are half as great as those of the rabbit (P. Wendeler). However, the peritoneum may have absorbed them. After thirty-six hours the eggs were near the distal end of the oviduct and still were present in the oviduct after seven days, with some in the uterine horn. Lode saw two or more eggs, one time eight rolled together in an albuminous ball, but considered that the egg-albumen mass was not found in the oviduct, but formed while yet in the peritoneum. Lode's opinion was that the cilia of the oviduct was the driving-power influenced and hastened by the period of oestrus (rut). In non-developed sex the experiments failed, were negative or de-

ficient. Lode saw in the extirpated endosalpinx, placed under the microscopic, powerful progressive movements of the cilia and the fluid stream. There is no doubt that the cilia alone carries the ovum through the oviduct from ostium abdominale to cavum uteri, but the fluid stream created by the moving cilia is more powerful to transport ova—it floats it. Thiry and others have shown that lower animals develop during sexual activity ciliated epithelia on the peritoneum adjacent to the abdominale ostium where normally exist flat perito-epithelia, and Moran has demonstrated in man one case that at the period of menstruation ciliated epithelia existed on the ligamentum infundibulum ovaricum. This periodic adjustment of environments enables sure transportation of ova. Sexual practice congests the oviduct and increases the rapidity of vigor of the cilia.

CLINICAL HINTS ABOUT CONVULSIONS.

BY EDWARD BLAKE, M. D.

LONDON, ENGLAND.

I do not propose to consider any of the forms of infantile convulsions occurring in the weak, the sickly, and the underfed, but I propose to ask why healthy and thriving children may abruptly fall into a condition of unconsciousness, characterized by more or less cyanosis, with spasmodic movements of the muscles generally? I hope to show that it is possible that the more vigorous the child the more prone it may be to become the victim of "fits."

We know how fierce and rapid is the metabolism of infancy. It is on account of the tremendous activity of tissue-change, during the first few months of life, that the excretories work with such breathless haste.

Diarrhoea, polyuria, hyperidrosis and accelerated respiration are normal in the newly born.

As long as the hard work of these Four Great Sewers knows no respite, all goes smoothly.

But, with the blood always laden with toxins of degenerating tissue, if we add a few extra ptomaines from temporary

dyspepsia and if by means of the same chill that caused the duodenal catarrh, so common in babyhood, the functions of the skin, or of one of the other great purifying agent, are arrested, then we begin to get septic matter accumulating in the nerve-centers and toxæmic convulsions may ensue. The time-honored treatment is to put the babe into a hot bath and keep it there till it dies. We can see why Chamomilla, by curing the catarrh, may put an end to the "fits."

Probably few things could be better than a hot bath, and nothing could be worse than keeping the baby there!

A hot bath arrests the action of the skin necessarily during immersion.

Is it be difficult to obtain a large quantity of water, then a hot blanket-pack would probably do even better. I have seen the hydropathic pack speedily stop the convulsions of uremia and aided by Apis, followed by Arsenic, restore the moribund patient to life.

Of course the four indications in treating such convulsive seizures are: 1, Stimulate the skin; 2, the lung; 3, the bowels, and, 4, the kidneys.

With one word as to pregnant and puerperal convulsions, I will conclude.

We were taught at one time that puerperal eclampsia was necessarily associated with albumen in the urine, we know now that there is no necessary connection between them.

I have had under observation an albuminuric of ten years' standing, who lost her albumen altogether during pregnancy. Seventeen years have passed away, but it has not returned.

There was a floating tumor of the abdomen, which apparently lay during the night on the left renal vein and compressed it, thus causing the albuminuria, which was always worse in the morning. The tumor was probably lipomatous in character, for it was entirely absorbed during the gestation period.

And now let us think for a moment of the state which pregnancy induces.

The gravid uterus has itself to be fed, and all the old toxines of metabolism must be got rid of. Added to these the toxines of the new life and its surround-

ings must be dealt with, but constipation frequently adds a new feature, by causing autotoxis coprostatica.

Imagine the tremendous labor imposed on the lymphatics and on the venous circulation!

On the liver, in blocking all the new toxalbumens from entering the general circulation!

On the embarrassed respiration, in oxidizing off so much effete material!

We can then conceive of how little will serve to throw the woman into convulsions, and we can understand the real rationale of treatment.

Attend to the emunctories; and in puerperal convulsions, remember Dr. Routh's admirable manœuvre, which depends on the fact that, in many cases, the convulsions cease on turning the patient over into the prone position.

It must not be supposed either that septic matter, or that the products of retrograde tissue — metamorphosis, are necessarily pernicious. Administered in sufficiently small doses they appear to be positively beneficial, for Dr. Hughlings Jackson has most sagely suggested that small doses of katabolic material probably form an indirect stimulus to the circulation.

Possibly rather by partially paralyzing the inhibitory fibres of the vagus, than by directly quickening the heart through its excito-motor fibres.

For I have shown elsewhere that most of the septic poisons are like lead, paralyzing agents.* A good example is afforded by the pharyngeal toxic products produced during the course of that form of submucous sphacelus which we call "diphtheria."

With some such predication we can readily understand the exhilarating mental effects of moderate exercise.

A still larger dose of the toxines we know has the property of overstimulating the heart, as indeed we have all experienced after mountaineering.

A very large dose overwhelms consciousness, as in the coma of excessive fatigue. An example of this is the stupor which succeeds a forced march, in the case of a young recruit. See "Animal

Alkaloids," by the late Sir William Aitken.

The heart is said to be thickened in pregnancy. This has been doubted — it received some confirmation at the hands of Max Dreysel, working under Bollinger at the Munich Hospital in 1879-91.

It was found by actual weighing that the heart thickened to the extent of 8.8 per cent per kilo of body weight.

I have seen a similar increase in vigor of the left ventricle in the diseases which simulate pregnancy.

If this be true, we can understand the impulse which is often given to the growth of new hair during gestation; and the arrest of the tendency to grow gray, observed by Rokitansky and confirmed by Dudgeon.

The added resistance of a vastly augmented uterus, and the interposition of the placenta, would partly account for the increased heart-action.

But the toxins of the foetus which have to be got rid of by the mother, in addition to her own metabolic products, will account, in another way, for her tendency to cardiac hypertrophy; as well as for her proneness to the various convulsive diseases. I have confirmed the suggestion of Dr. Hughlings Jackson by clinical observations made independently.

I have shown that sapremia may cause sustained tachycardia or "heart hurry," leading to the development of latent neuroses in women, to rheumatic gout in men, and to dermatoses in childhood.

In accident cases, however slight, to which the surgeon is summoned, and in all minor operations, it must be always remembered that there is a possibility, which must be provided for, that the patient may faint. Men must be even more closely watched than women, for in the latter the process is nearly always more gradual. Men usually faint suddenly as if they had been shot, while women generally give some warning, and will often be able to reach a chair or some other position of safety before the syncope occurs.

SELECTED

RHUS TOX. IN OCULAR DISEASES.

BY J. R. HINSON.

(Read before the Boston Homœopathic Medical Society.)

Rhus has a decided action upon fibrous, vascular and nerve tissue, skin and mucous membrane. The eye having an outer fibrous, a middle vascular, and an inner nerve layer with a protective covering of skin and mucous membrane, and Rhus acting decidedly upon all these tissues, its field of usefulness in diseases of this organ should be, and is, a large one.

While every physician has a predilection for some remedy, it seems to me that Rhus is probably the most frequently indicated in diseases of the eye and contiguous structures, excluding those due to syphilitic infection. Its sphere of action ranges from an aggravated case of simple conjunctivitis to the most destructive case of orbital cellulitis and to inflammatory and suppurative processes of the iris, ciliary body, choroid, and retina. We find in Hull's "Jahr," one of the oldest works on symptomatology, the following symptoms: Eyeball feels sore when turning or pressing upon it; bruised pain in orbital bone; twitching and contractive sensation in the lids; cutting in eyes; difficulty in opening lid in morning; ophthalmia scrofulous and arthritic, the swelling closing the eye; inflammation, swelling, and agglutination of the lids; photophobia; sensation as of gauze before the eyes, which Norton notes "as of a veil."

Skin symptoms: Small, burning vesicles; burning, itching eruption, particularly on eyelids, etc., and small yellowish vesicles; also vesicles containing milky and watery fluid; red, shining swelling, with stinging, sore pain when touched; swelling of face, particularly eyelids, swelling followed by an eruption of vesicles filled with a yellowish liquid.

From other sources and from observation I have gathered the following: Rhus acts prominently upon mucous membrane, muscular and fibrous tissue, and nerve sheaths. Upon the skin its action extends from a slight erythema to the gravest form of vesicular erysipelas.

Upon mucous membrane Rhus acts similarly as upon the skin, affecting most powerfully the conjunctiva, which action we will note later. Cellular tissue becomes infiltrated with a serous exudate, continuing on to impairment of nutrition and abscess formation, in which respect Rhus differs from Apis, Apis never producing cellulitis with abscess; inflammation of the eyes and lids, with redness and nightly agglutination; eyelids oedematous or erysipelatous, with scattered vesicles; heaviness and stiffness of lids as if paralyzed. Having given this outline of conditions caused by Rhus, I will endeavor to make some clinical applications which may prove of value.

We will consider, first, the conditions known in text-books as phlyctenular conjunctivitis and keratitis, or inflammation of the cornea. For convenience we will include them under the general term phlyctenular ophthalmia. In its incipency this disease is a vesicular inflammation of the conjunctiva, which is a mucous membrane, and the distinction is merely one of location, the superficial epithelial layer of the cornea being practically a continuation of the conjunctiva. I recognize three varieties as regards the location of vesicles, in all of which Rhus is indicated if the following symptoms are present: Swelling and redness of lids, especially the upper; lids spasmodically closed; intense photophobia, patient burying face. Upon opening the spasmodically closed lids there will be a gush of hot tears and mucus or muco-pus. The conjunctiva will be found echemosed or swollen and congested, with engorgement of vessels. In a considerable percentage of cases there will be a vesicular eruption and a scalded eczematous condition of adjacent skin surfaces, even extending well down on to cheek and upward on to forehead. A similar condition may be present around the nails. Pain is generally neuralgic and worse at night. If vesicle or resultant ulcer is on the cornea, which is usually the case when the above aggravated symptoms are present, there will be a leash of vessels extending from corneal periphery to the foci of disease. A second form is that in which we have a row of

vesicles, or minute depressions caused by the breaking down of vesicles, extending for a greater or less distance around the corneal periphery. In this variety the general and local disturbance is less decided, and we find the mercuries better adapted, possibly the Merc. dulc. more frequently than the other preparations. Third, the vesicle or ulcer is situated in the ocular conjunctiva. These cases have a minimum amount of pain and discomfort, in some instances a nightly agglutination of lids being all that is complained of. It is in this form that Puls. finds its field of usefulness. There is a class of cases in which I wish specially to emphasize the value of Rhus, namely, in old injured eyes. We all meet cases in which an eye has been injured, months or years previously, either by blow, puncture, accidental or operative cuts, perforating ulcer, etc., in which the sight may be partially or entirely destroyed, and which at times becomes inflamed, painful, and sensitive to pressure and motion. The conjunctival vessels are engorged, together with circumscribed corneal injection, lacrymation with or without photophobia. In such cases Rhus is a most valuable remedy and seldom fails to relieve. It is of equal or greater value in recent trauma, either accidental or operative, when the tendency is toward inflammation, suppuration, and destruction of eye.

In disturbances of lacrymal duct and sac, followed by abscess formation, with inflammation and induration of the overlying tissues of a dark red hue, Rhus is of use both before and after the artificial or spontaneous rupture of sac, particularly the latter.

In orbital cellulitis it is generally admitted that Rhus is the remedy, even with formation of pus, in contradistinction to Apis, and should always be prescribed if there are no distinctive indications for another remedy.

In idiopathic and rheumatic iritis, Rhus stands as the first remedy to be considered. It is, however, of little permanent value if disease is of syphilitic origin. Here we must rely upon the mercuries and iodides.

In ptosis or dropping of lid and other

ocular palsies, it stands side by side with Caust.

There are numerous other ocular diseases in which Rhus is of value, but it is the object of this paper merely to draw your attention to some of those conditions which the family physician is occasionally, if not frequently, called upon to meet.—*New England Medical Gazette.*

EXCLUSIVE SOUP DIET AND RECTAL IRRIGATIONS IN TYPHOID FEVER.

BY A. SEIFERT, M. D.

NEW YORK.

To diminish the number of pathogenic organisms in the human body is to-day recognized to be the best treatment of infected persons. In typhoid this object can be attained successfully by following two distinct indications, namely: (1) by promptly removing all remnants of food from the alimentary canal, and then permitting only such articles of diet to come in contact with the infected surfaces of the intestine as will offer but poor culture media for the typhoid bacillus and its neighbors; and (2) by systematically irrigating the rectum during the entire course of the disease.

To give a cathartic at the beginning of an attack of typhoid is universally practiced, but also the early replacement of the infected alimentary contents by food which will even feed the remaining bacteria better than the removed solids, namely: by milk. This is like emptying a dish of decomposing solid food and immediately filling it again with fresh milk, in the expectation of keeping the latter sweet.

Until the chief cause of gastroenteritis in children had been demonstrated to be the manure bacteria that drop into the milk used for infant feeding, their rapid multiplication during warm weather and their action upon the children who swallow them, and until the imperative therapeutic necessity had been established to withhold all milk from an enteritic patient until he was cured, our treatment of gastroenteritis was but in a doleful state.

To my mind, patients fed on milk during an attack of typhoid (a specific form

of enteritis) are but little better off to-day than our former little patients were during an attack of summer-complaint, with milk and opium-mixtures in their intestine. If most of our typhoid patients fed on milk were not adults but children, like in gastroenteritis, the percentage of typhoid mortality of to-day would equal that of gastroenteritis of former years. For not alone is the typhoid bacillus to be considered in the bowel of the typhoid patient, but also the many other alimentary bacteria that take part in the attack on the human organism during this disease. If milk is the best food of intestinal bacteria during enteritis without typhoid mixture, then I see no reason why it should be less favorable for their sustenance and propagation during enteritis caused by them and the typhoid bacilli.

Reflections of this nature caused me to try the possibility of feeding typhoid patients on a fluid diet not including milk. My first case so fed was under observation during October of 1889, and since then none of my typhoid have been given milk until the rectal temperature has been normal for at least two days. It was found that at the beginning of the attack that plain, cold water sufficed during the first twenty-four to forty-eight hours after the initial purge, although, of course, much depended upon the gastric condition of the patient. Then soups made of meatbroths, containing oatmeal, barley, rice, and peas, strained, of course, and well spiced with salt and pepper; and after another two days lentil-soup and the yolk of a fresh egg added to the oatmeal, rice and barley soups, were given, so as to allow an adult one-half of a pint of two kinds of soup alternately every three hours, and smaller quantities to children according to age. Five meals in all were given during the day. At night only fresh, cold water was given, ad libitum, as well as during daytime, in the intervals between the meals. Five to fifteen drops of the diluted hydrochloric acid were given before each meal, unless hyperacidity prevailed. No other medication was employed, irrespective of the height of the temperature or the frequency of the stools. Alcohol was but given, in small

quantities to habitual toppers during the first few days, at night. Occasionally cold, strong, black, sugared tea was used as a stimulant.

In July, 1889, Backhaut, an assistant in Prof. Mosler's clinic at Greifswald, published a report (*Deutsch. Med. Wochenschrift*, July 18, 1889) on the treatment of typhoid patients by rectal infusions of one-half per cent tannic acid solutions. The good results obtained were attributed to the germicidal action of the tannin. I ventured to suggest to Prof. Mosler, by letter at the time, that the twice daily executed cleanings of the lower end of the colon might be the cause of the observed beneficial effect upon his patients; and from that time on every typhoid patient under my care was given two to four rectal enemata of plain warm water daily. It was soon found that rectal tubes were harmful and unnecessary, and that if the buttocks of the patient were but elevated upon the bed-pan, the water flowing gently from the fountain syringe, hanging about three feet above the patient, would dilate the lower colon sufficiently to dilute and carry off the accumulated typhoid feces. Furthermore a short tip introduced through the sphincter ani cannot possibly reach typhoid ulcerations in the descending colon. Since the summer of 1889 these therapeutic measures have been employed by me in every typhoid patient in private practice as well as during my ten years of service in St. Francis Hospital in New York. In all 153 cases were treated in this manner. Seven cases ended fatally, of which three were brought in moribund and four had complicating bilateral pneumonia.

RESULTS:

1. Delirium, headache, insomnia, nausea, vomiting and tympanitis usually disappeared within forty-eight hours of treatment.
2. Tympanitis, nausea and vomiting never developed in any patient, even when complicating pneumonia was present.
3. The fur on the tongue disappeared within a few days.
4. Appetite came frequently on the fourth day of treatment, even when the

thermometer registered 102 to 103 degrees F.

5. Even excessive diarrhea (fifteen to twenty-five daily stools) disappeared invariably within the first week of treatment.

6. In all uncomplicated cases the temperature began to decline within twenty-four to forty-eight hours after the beginning of treatment and invariably would reach the normal figure within ten to twelve days.

7. In cases complicated by pneumonia, nephritis or phlebitis when treatment began the temperature usually remained in accord with the inflammatory conditions found until these also disappeared, while the cerebral, gastric and intestinal disturbances usually subsided as rapidly as in the uncomplicated cases, excepting anorexia.

8. Complications, when not present at the start, were very rare and then usually developed within the first two days.

9. Intestinal hemorrhage was noticed in three cases, none ending fatally. Perforation did not occur.

FINAL REMARKS.

It was immaterial whether this treatment was begun in uncomplicated cases during the first, second, third or fourth week of an attack, for the above mentioned improvement always began within forty-eight hours, exactly like in gastro-enteritis. Cases coming under treatment during the first two weeks of illness usually presented more marked and rapid improvement during the first four days of treatment than older cases.

That milk given to a typhoid patient will cause a new rise of temperature after days of improvement on a soup diet, I have demonstrated time and again to my house-staff in the hospital.

Many of the pneumonia attacks complicating typhoid are due to secondary infection through the blood by organisms finding their way to the lung tissue from the intestine, like in the systemic infection of enteritis in children. By diminishing the quantity of absorbable toxic material in the intestine by appropriate diet and frequent rectal irrigations, we cut short the supply for systemic and pul-

monic invasion, and materially aid the restitution of normal conditions.

Typhoid bacilli will readily grow in soup, but this food is so rapidly absorbed that in comparison to milk curds it cannot aid their sustenance long enough to injure the patient.

The Hot Bath as an Aid in Abdominal Diagnosis.

Dock does not think it necessary to speak at length about the importance of abdominal examinations in general. The value of inspection, in a good light, and with the patient in proper position, in many local disease of the abdominal organs, and in certain diseases associated with eruptions or other alterations of the skin, is well known. The importance of palpation is also recognized. But even with the greatest care and skill, with the patient in a good position, the abdominal wall relaxed, the hands applied without any marked pressure from the finger-tips, and the examiner standing or sitting in such a position that he has complete control of his work, in some cases the results are unsatisfactory. This may be due to rigidity of the abdominal wall from disease, or unusual irritation of the muscles without local disease, or sometimes simply to the thickness and healthy resistance of the abdominal wall. In such cases, where the suspicion of abdominal disease is strong, the patient is sometimes anesthetized for the purpose of completely relaxing the tissues. There is a method, however, of accomplishing the same results that is not only safer but actually superior—namely, by immersing the patient in a hot bath. This is no doubt practiced by many, but certainly not to the extent it should be, and it is frequently not mentioned in works treating of abdominal examination. A few years ago Lennof and Berkhan advocated this method in Germany. On the whole references are exceedingly scanty.

The advantages of the hot bath are: In the first place, less risk—although it must rarely happen that serious or dangerous accidents occur from anesthesia given for diagnostic purposes, yet there is a theoretical danger that can never be lost sight

of. In the second place, the method is less disagreeable, the slight discomfort from being immersed in very hot water not comparing with that from inhaling the anesthetic. In the third place, there is great advantage in having complete control over the patient's respiration, and in this way calling into play the powerful action of the diaphragm. The only difficulty about the method is that it requires a bath and a sufficient quantity of hot water, and also, in cold weather, requires gradual cooling before the patient can go out of doors. In order to use the bath, the tub should be long enough for the patient to lie almost flat. This is not absolutely necessary, for in a short tub we can get along by having the patient draw up the knees. Nor is it necessary to have the patient suspended in a support, although in some cases this may be pleasanter for the patient and easier for the operator. In using the hot bath the patient gets into a tub almost full of water at about 100 degrees F., and the temperature is then rapidly raised by pouring in very hot water until it reaches at least 110 degrees F. In many cases complete relaxation will be obtained in five or ten minutes at this temperature, but in other cases it may be necessary to raise the temperature as high as 120 degrees F. As the water cools rapidly, hot water must be on hand for keeping up the desired temperature in cases of prolonged examination. The amount of relaxation obtained varies much in different cases, but is always sufficient to enable one to feel many things otherwise impossible. As an example the following cases may be cited:

A patient was thought by his physician to have a tumor in the region of the spleen. He had lost weight and could not get his mind off a prominence in the left hypochondriac region. A prominent abdominal specialist made a diagnosis of sarcoma of the kidney. Others supposed there was a tumor of the spleen, and a number of surgeons recommended an operation. Examining the patient in the ordinary manner, Dock found a slight prominence of the lower costal cartilages on the left side. The spleen was not enlarged; examination of the urine and blood was negative; the abdominal mus-

cles were very strong, the recti especially, forming thick, tumor-like masses on slight provocation. He put the patient in a bath at 120 degrees, and it was then easy to feel not only the splenic and lower renal region, but also the under surface of the liver and even the vault of the diaphragm on the left side. The kidneys were not enlarged. There was no evidence of disease. After explaining that he thought the muscle tumors had misled some of the previous physicians, the patient explained the unusual size of these organs. In earlier life he had been an athlete, and one of his specialties was supporting his head and heels on two chairs, and, keeping his body rigid, supporting three or four men on his abdomen. The patient's symptoms could be readily ascribed to overwork and worry. He was advised to think no more about his abdominal tumors. More than three years has elapsed since the examination, and although some of the symptoms are still present, yet the idea of possible disease requiring operation has long since been abandoned.

In another case a girl of 15 complained for several months of more or less severe pain in various parts of the abdomen. Various diagnoses were made, the last one before he saw the patient being enlargement of the liver and spleen. On examination he could find no evidences of local disease in the abdomen, and for some time he could not believe that the patient had any disease there. Later, however, the complaints being constant, he examined the patient in a hot bath. The abdominal wall was well developed and strong, but permitted a fairly complete examination in the ordinary way. In the hot bath, however, it was comparatively easy to feel in the right iliac fossa a mass about two inches long, and having about the diameter and hardness of a lead pencil. Though in the appendix region, the consistency was much too hard for the normal appendix, such as one can frequently palpate in favorable cases. Dock made a diagnosis of appendicitis, notwithstanding the fact that there was no history of fever, nor positive history of tumor or other local symptoms of appendicitis. On his advice

an operation was made. The appendix was found to be hard and had numerous fine adhesions to the surrounding tissues. It was removed, and the patient made a good recovery. Microscopic examination showed extensive chronic disease of the appendix, especially involving the muscular coat and the peritoneum.

In diseases of the gall bladder and of the liver and pancreas, examination in the hot bath very often adds largely to the knowledge obtained by palpation, and should not be omitted in obscure cases.—*The Therapeutic Gazette.*

Eye Symptoms in Tabes.

(1) When there is paralysis or paresis of any of the intrinsic or extrinsic muscles of the eye or muscles of the lids, think of tabes.

(2) When there is primary atrophy of the optic nerve, think of tabes.

(3) When there are noninflammatory pupillary changes, think of tabes. — Dr. C. J. Swan.

A New Use for Vaseline.

When sterilized vaseline is introduced within the tissues it undergoes no change and appears to be retained for an unlimited period. This property has been made use of for plastic purposes by Gersuny, of Vienna. In an individual upon whom a double castration had been done, for tubercular orchitis, several injections of white vaseline were made, finally resulting in the formation of two deposits which were a fair representation of the original contents of the scrotum. It is not to be deemed that such a result is a rather unimportant one. In this country we have heard of one or more individuals who were made happy by the insertion of a celluloid representative of a long lost testicle. If this is to be considered from a psychological standpoint merely, it is unquestionably of interest to behold in what strange places vanity may crop out. Not only is vanity catered for by this procedure, however. An individual suffering from a difficulty of speech after an operation for harelip received an injection of vaseline under the pendulous fold

of the upper lip and was thus given the amount of labial resistance needed for proper articulation. It is therefore evident that the ingenuity of surgeons will find new and original uses for this procedure.

Lignosulfit in Tuberculosis.

Of all remedies employed in tuberculosis, those which directly reach the alveoli give the most promising results, and lignosulfit, in the opinion of R. Simon, ranks most highly of these. It is a mixture of sulphurous acid with the aromatic ingredients of fir, dissolved to form a brown fluid. A 10-per cent aqueous solution is allowed to saturate the air of a room in which the patients must remain one to two hours daily. Improvement soon manifests itself by a change in the physical signs over the lungs and by a gradual disappearance of the annoying symptoms. As a valuable adjunct to the treatment, pulmonary exercises are mentioned; these are especially good when the acuteness of the attack has subsided and the patient is well on the road to recovery.

Empyema.

Dr. H. P. Ritchie, deterred from resecting a rib by the depressing effect of this operation in tubercular pleurisy in young and weak children, tried Lerascheff's method of replacing a purulent exudate with a neutral fluid. The child was in such condition that an operation was unjustifiable. He aspirated four times the first day, and each time injected normal salt solution, warmed. The last time only a turbid fluid returned. Under medical treatment of guaiacol and cod-liver oil, and without further surgical procedure, the child rapidly recovered.

In children enlarged lymphatic glands about the neck are frequently due to enlarged tonsils or to the presence of adenoids. The throat must, therefore, always be carefully examined in these cases, for removal of the tonsils or adenoids will cause the glands to subside.

In adults enlarged glands are very suggestive of the presence of malignant trouble, and necessitate careful examination of the whole mouth and throat.

An attack of hysteria simulating unconsciousness in a woman may be aborted by the surgeon's taking up a pair of scissors and regretfully announcing that he will have to cut all the patient's hair off in order to make applications to her head. It is doubtful whether this bluff has ever been known to fail.

When feeling for fluctuation in any part of the body that is covered by heavy muscular structures, place the hands along the long axis of the muscular fibres, and never across them. The latter position would certainly deceive the observer into thinking that fluctuation is present, as may easily be seen in the case of the large anterior muscles of the thigh.

In furuncles and carbuncles of the upper lip it is especially important to operate promptly, usually by thorough incision under an anesthetic. The location of the disease, in such cases, makes them peculiarly dangerous owing to the possibility of the occurrence of rapid thrombosis of the facial veins, extending to the cerebral sinuses. This, in turn, is apt to cause fatal pyemia.

In every case of coma, whether from alcohol or any other cause, always investigate the bladder by percussion, in order to find out whether there is a retention of urine. Should this be the case, measures must at once be taken to empty the bladder. If coma is due to nephritic trouble, it must not be forgotten that the fact that no urine has been passed for a long time may be due to suppression instead of retention.

If the gall-bladder is so seriously diseased as to warrant a surgical operation for its relief, it is better practice to remove it in toto than to leave it as a place for the further accumulation of gall-stones, or as a point for the setting up of new inflammations.

SURGICAL ERA

CHAS. ADAMS, M. D., EDITOR

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ORIGINAL ARTICLES

SURGERY OF THE GALL BLADDER AND DUCTS.

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ADJUNCT PROFESSOR AND DEMONSTRATOR OF
ANATOMY IN THE CHICAGO HOMOEOPATHIC MEDICAL COLLEGE.

I have selected this subject not because I wish to give you a dissertation upon the technic of gall stone surgery, for space would not permit, but to present for your consideration three very interesting and to me instructive cases that have occurred in my practice in the last few years. The importance of this subject may be gathered from the fact that post mortem records of persons of all ages and both sexes prove gall stones to be present in from five to ten per cent of all Europeans. Two of my cases did not show any symptoms by which cholelithiasis could be diagnosed, but rather led me to suspect appendicitis, which did exist in conjunction with cholelithiasis in the third case. The second case, while easy of diagnosis, presented a most unusually complicated condition for the operator to unravel.

Gall bladder surgery was rarely attempted prior to 1885. Diseases of the gall bladder were formerly considered to come under the domain of medicine. Some pathologists believe the spread of the gripe to be responsible for the increase of gall bladder disease.

Case I. Mrs. S. Previous history, a great many miscarriages; 56 years old. Patient went to hospital the 12th of September, 1899; operated September 13. Symptoms closely resembled appendicitis. Pain, tenderness and muscular rigidity in right iliac region; great distension of the abdomen; nausea, vomiting; no jaundice; temperature 100; pulse 110. The usual incision at the outer border of the rectus muscle was made in the appendicular region. The first thing that presented was a large pyramidal tumor

adherent to the omentum, that pushed its way through the abdominal incision. On continuing the incision up to the costal border, this tumor was found to be an enormously enlarged gall bladder. Digital examination of the neck revealed the presence of a large gall stone, egg shaped, $2\frac{1}{2}$ inches long, $1\frac{1}{4}$ inches in diameter. Continuing the examination, the common, cystic and hepatic ducts were found to be free of stones and in a comparatively normal condition. The gall bladder was opened, drained, a stone removed, the probe passed into the cystic ducts, proved it to be patulous, and as cholecystotomy was the operation indicated, it was performed in the usual way. Recovery was uneventful, excepting that the patient left the hospital with a sinus not entirely closed.

Case II. Mrs. D., aged 30. Previous history, five children, one living and one miscarriage. Three years ago was operated on for ovarian tumor, from which she made a good recovery. First attack of cholangitis Jan. 10, 1900. She was then in bed four and a half months, when vomiting set in which lasted two weeks. Jaundice was first noticed April 1; then the skin cleared a little and in two weeks she had another attack of icterus, repeated attacks of nausea and vomiting with icterus every few days, no appetite, menstruation very irregular; almost every day she vomited bile. About the middle of July the symptoms became quite grave, when I was called in and made a diagnosis of cholelithiasis and recommended an immediate operation. As her condition was serious at this time, an operation was attempted with some trepidation. The Kocher incision at the costal border was made and the contracted bladder filled with small gall stones of a saponaceous feeling; one stone was found at the junction of the hepatic and cystic ducts, one in the common duct and two in the cystic duct. The stones in the cystic and at the junction of the hepatic and common ducts were movable and were with the fingers

manipulated from their position toward the gall bladder. The stone in the common duct was about three times the normal caliber of the duct and of course was fixed; nor could it be broken up as suggested (Mayo Robson) with the fingers. It was considered inadvisable to attempt to remove this at this operation; moreover, the contracted as well as the friable condition of the gall bladder predisposed me to the most conservative operation, that of cholecystotomy. This operation was performed and one ounce of olive oil was injected through the drainage tube into the gall bladder daily for one week. At this time cholagogue cathartics were administered, which served only to increase the flow of bile from the fistulae and thereby dislodge a few of the smaller stones from the gall bladder. The stools continued clay colored. Then a change was made and a weak solution of chloroform was injected in one ounce doses for several weeks, followed by a free calomel cathartic with the same results as before. But the drainage of the gall bladder had relieved the congested state of the liver and the patient's skin and sclera were normal and her general condition much improved. Six weeks from the time of the first operation a second operation was performed. First a modified cholecystectomy was performed. The gall bladder was not removed entirely, but by a removal of nearly all the tissues except those in contact with the liver, and a row of catgut sutures leading from the cystic end to the distal end, the edges of the membranes were brought together, forming a continuation of the cystic duct. The peritoneal coat was brought together by Lembert sutures. This small duct, about the size of a lead pencil, was attached to the parietal peritoneum, thus obliterating the gall bladder and at the same time establishing a perfect drain to guard against a possible stenosis of the common duct. Choledochotomy was performed on the common duct, the stone removed, the duct probed and found to be open. It was closed with a double row of Lembert sutures. In order to guard against a possible infection from leakage and to drain the same of bile and a few small stones that had dropped into the cavity and

could not be removed by the sponge, an incision was made at the outer border of the quadratus lumborum and a large drainage tube was introduced through this opening into the foramen of Winslow. The costal border incision was closed except for the point at which the gall bladder, converted into a duct, was attached. On the fourth day the lumbar drainage was removed and patient recovered and returned to her home. She reported stools normal color and in four weeks duct closed, showing that the bile was passing through its natural channel. At the end of six weeks she came back to the hospital, complaining of great pain in the region of the stomach, which caused her to faint sometimes after eating. An incision was made in the line of the old one. The stomach and omentum were found matted together about the obliterated gall bladder. The adhesions were removed and I was gratified to find that the operation on the common duct as well as the removal of the gall bladder was an entire success. The patient has since entirely regained her health and her weight has increased over forty pounds.

Case III. Mrs. F., aged 37. I first saw this patient in consultation with Dr. O. F. Pierce, her family physician, April 17, 1901. Her symptoms at that time were severe pain in the right iliac region, vomiting, temperature subnormal, pulse 120. A few days before she had had an attack of diarrhoea with from 15 to 20 movements in 24 hours. Then she began to bloat. Dr. Pierce said that although the pulse was always high, the temperature was never 100. He could get no satisfactory movement of the bowels. Two and a half years ago she had had a similar attack, with acute pain in the right iliac region, tenderness, vomiting and diarrhoea, and for two or three months following there was a mucus discharge from the bowels. One peculiar feature of this case was that her face was flushed from the time I saw her until shortly before her dissolution. She had no jaundice and no marked tenderness over the liver. In spite of the muscular rigidity, a large fluctuating tumor was made out on the right side of the abdomen. Operation was performed April

19. I began with a median incision, but on examining the abscess abandoned this for an incision through the lower right semilunaris. Surrounding the head of the caecum was a large abscess partly cut off by some of the omentum, which was sloughing. The abscess cavity was evacuated and a search made for the appendix, which was found to be post-caecal and of course, perforated. The caecum was lifted from its bed and released from its adhesion; the omentum resected and the appendix removed. On raising the caecum a large fluctuating mass was found below and to its right. This was traced up to the liver and found to be a very large gall bladder containing four stones at the systic opening. Cholecystotomy was performed, but the patient never rallied and died in 24 hours.

In seeking for the cause of death, Dr. Pierce found that the patient had suffered a severe hemorrhage some days before the operation, and this, together with the shock, undoubtedly hastened her death. I mention this hemorrhage, not only because it occurred in this case, but for the reason that after a severe attack of cholangitis, profuse capillary hemorrhage is probably the greatest menace to the operator's success.

The gall bladder was first removed by Langenbeck in 1882. The operation was unfavorably received at first and for the primary relief for gall stones it has never come into vogue. The operation has been performed only six times in Russia. It has been generally rejected in England. French surgeons have used it but failed to increase its popularity. It is essentially a German operation.

(1) Only two are on the records of the New York Surgical Society. Gall stones are the product of disease and not the cause.

(2) To-day cholecystectomy can and must be considered, not only as a physiological operation, but also as a very rational intervention.

(3) Cholecystotomy is not a radical operation. The reservoir so disposed to stone formation is left behind. Six per cent of the cases recur de novo, when cholecystotomy has been performed.

(4) There are two forms of gall stone

colic, the simple, or spasmodic, or labor-pain-like, which is produced by inflammation of the gall bladder, and the stretching of the gall bladder by exudate. The simple gall stone colic is usually produced by mechanical irritation of the gall bladder wall, causing it to contract spasmodically in an effort to expel stones. The other form of gall stone colic is usually connected with disease of the gall bladder and its environments, with cholecystitis and peri-cholecystitis, that is, local peritonitis. These inflammations do not begin so suddenly, as a rule, as the simple gall stone colic. Cholecystitis calculosa is at times accompanied by severe pain and the diagnosis is very difficult. Jaundice may be present, but it is by no means a constant symptom. It is usually absent when the disease is confined to the gall bladder and cystic duct, but it may be present when the disease process is confined to the gall bladder and cystic duct, and is then connected with a disease function of the liver cells. Tumor is one of the most important signs. The stomach and intestines are frequently involved in diseases of the gall bladder. In making the diagnosis, look carefully into the history of attacks of colic pain, radiating back to the right hypochondria. A tender point at the intersection of the right mammary line with the costal border. In all complicated and abscessed cases, it is well to think of the appendix and gall bladder.

The following are Schroeder's statistics, collected, covering all ages:

Age.	Abd.	With	
	sections.	gall stones.	per cent.
0-20	82	2	2.4
21-30	188	6	13.5
31-40	209	24	11.5
41-50	252	28	11.1
51-60	161	16	9.9
60 and over	258	25	25.2

Hans Kehr of Halberstadt has probably the most extended experience in gall bladder surgery. He reports 450 cases with the following classification:

1st, Stone in gall bladder with open cystic duct and no adhesions.

2nd, Stone in gall bladder with open cystic duct and adhesions.

3rd, Stone in the gall bladder, cystic

duct being closed by inflammation of, and stones.

Inflammation according to the grade of infection may be (a) serous, (b) purulent, and (c) gangrenous. Accompanying peritonitis may be circumscribed or diffuse. If the inflammation extends to the neighborhood, it results in peri-colecystitis, with or without exudate. From this follows adhesions between the gall bladder and omentum or intestines and stomach, or a perforation into the stomach or external.

(3) Stone in the common duct (a) acute obstruction of the duct, or (b) chronic obstruction of the duct. The inflammatory processes within the common duct are essentially the same as those in the gall bladder, but they are more likely to be followed by

(5) Diffuse holangitis, thrombo-phelbitis, abscess of the liver or pyemia.

Kehr does not believe in the immediate suture of the gall bladder, which is spoken of as the ideal operation. Cystectomy should only be performed if the common duct is free and the head of the pancreas not enlarged. Kerr is inclined to cystectomy; in acute cases he performs cystectomy, and in chronic, cystostomy.

The conditions, according to Kerr, which absolutely demand operation, are:

1. Acute sero-purulent cholecystitis and pericholecystitis.

2. Inflammatory adhesions between the gall bladder and intestines, stomach or omentum, provided they produce such symptoms as pain, peri-pyloritis, stenosis of the pylorus or duodenum, ileus, etc.

3. Chronic closure of the duct.

4. Chronic closure of the duct leading to hydrops or empyema.

5. All forms of cholelithiasis, which beginning mildly, nevertheless resist hydrotherapy and internal treatment, and by constant pain and emaciation destroying the patient's pleasure in life and making it impossible for him to pursue his occupation.

6. Suppurative cholangitis and abscess of the liver.

7. Perforation of the biliary tract or peritonitis.

8. The morphine habit due to gall stones. Under such circumstances an

operation is the best beginning of the cure of the habit.

In conclusion, permit me to say that it is my firm belief that the day is not far off when the medical treatment of gall stones will be abandoned for radical intervention, just as has been the case in appendicitis.

1. Med. Record, N. Y., Vol. 57.

2. Traits de Chirurgie, Vol. 6.

3. Sammlung Klin Vortrage, No. 225.

4. W. Fleiner 47; Jahrg, No. 28.

Read before the Kentucky State Homeopathic Medical Society.

The Use of Silver Wire and Electricity in the Treatment of Aneurisms.

Dr. Leonard Freeman reported two cases of thoracic aneurism, in one of which there was apparently a perfect cure; in the other the walls were now nearly an inch thick; it was proceeding very satisfactorily. He spoke of the use of local anesthesia and of the need of scrupulous asepsis. He had made considerable inquiry into the disposition of the wire within the sac, and conducted the following ingenious experiment to determine this point. Feeling that the coiling of the wire in Hunter's glass bulbs scarcely simulated its behavior in the aneurismal sac, he hollowed out the interior of a large turnip and fed the wire into it. This experiment had led him to believe that the soft, malleable silver wire was much to be preferred to the hard, drawn kind recommended by Hunter. As to the amount of wire used, he believed that literally the more the better, even up to two hundred odd feet. He used a current of low amperage for a half-hour.

Pin worms about the rectum, in women, are a frequent source of pain which may resemble a good deal the pain of coccygodynia. In other instances they lead the patient to believe that some uterine disturbance exists.

Peripheral pains about the loins, groins or the limbs are often due to pressure upon the anterior crural, obturator, and other branches of the lumbar plexus, caused by fecal accumulation.

Some of the Frequent Errors in Technic of the Average Surgeon.

The following has been written not with the idea of enumerating all our errors of technic, nor of bringing before you the ideal technic of any particular operation or series of different operations. Nor do I expect to bring forth anything strikingly new, but only to refer to a few of our frequent errors in following out old, and most of them now well established procedures.

Most surgeons of practical experience have an ideal of their own, and how well we live up to it, and in what measure we often fail, either in our conceptions or the means of carrying it out, it shall be my object to show.

The subject naturally divides itself into 1st, Errors or omissions in preparing ourselves, our patients and our instruments for the operation; and 2d, errors in our technic in the operation.

By these errors or omissions are meant those that give rise to or may give rise to sepsis or the failure to secure primary union or the ideal result that may be expected in a given case.

I believe one of the principal errors of the average surgeon in preparing himself for an operation lies in the means of cleansing his hands, the depending too much on chemical antiseptics, and the condition of his nail brush. I have frequently seen nail brushes that had not been sterilized at all or, perhaps only once, used by the surgeon and all his assistants. Of course, however well one may scrub with a dirty brush the hands and nails, there is a fatal break in the technic, and one is not sure he is clean when he commences his work; in fact, if he thinks of it at all, he is almost sure that he is not.

Kelly says, in substance, that in the various clinics which he visits he sees no more serious break in the technic than the using of unsterilized nail brushes.

Again, the surgeon is not always sufficiently careful of his person, and fails to remember that infection of a fresh wound may occur through failure to have his teeth and mouth in the best possible asep-

tic condition. W. Heubener and Flugge have shown that the mouth forms a breeding place for all varieties of micro-organisms, and that spores may be carried a considerable distance by small drops of saliva or nasal secretion from speaking, coughing or sneezing over a wound.

Another frequent error in technic and one for which there seems no excuse, even in emergency surgery, is the doing of an operation in street clothes or clothing only partially covered by a gown. There is no reason why an emergency surgeon should not have a suit or two packed with his emergency kit, and always ready for use. If we do not, we are surely not living up to the best light we have.

The use or non-use of gloves during an operation is a question about which there seems to be much doubt and consequent errors of omission or commission. One part of the question is definitely settled. The surgeon who operates on an infected case without gloves, and rubber gloves at that, is committing a surgical crime. Lockett has shown that the only gloves that are of any use are rubber gloves, and that the cotton glove, paraffined or unparaffined, is useless.

Many of our prominent surgeons use gloves in all cases, but there are many objections to this, the chief of which is the blunting of tactile sense. But it seems certain that the uncompromising stand of the future will be in favor of rubber gloves in all infective operations. The reasons for this are two-fold. They protect both surgeon and patient. I know of more than one case of a surgeon acquiring syphilis from operating on a specific case without gloves. Of course, failure to cleanse the hands just as thoroughly when wearing gloves as when not would constitute a bad error, as a break in the glove might mean an infection of the patient. The wearing of cotton gloves, in view of the above, is a bad error in technic because the surgeon is handicapping himself without benefit to his patient.

The failure to properly protect our health may also be considered an error in technic. To do his best work a surgeon must possess the best of health, for often

every faculty of the mind must be brought into play at once in deciding intricate questions in a moment, and the physician must be prepared to stand the strain of long continued and accurate work, both mental and physical.

In preparing patients for operation, the chief error I have observed, and the one I believe to be most general, arises from an inadequate conception of the effects of intestinal toxemia on the organism and its consequent effects on tissue resistance. For after all, tissue resistance, the inhibitory power of the juices and fluids of the body over the growth of micro-organisms, is the *sine qua non* that stands between surgeon and sepsis; for no wound is absolutely sterile, and it may and often does contain a few pyogenic cocci and yet heal by first intention.

However, this fact furnishes no excuse for our failure in a personally rigid antiseptic technic, as in the event of carelessness we might—and years of accumulated clinical evidence demonstrates that we probably would—introduce more micro-organisms than the fluids of the body could dispose of and thereby produce sepsis.

But leucocytes are nature's germicides, and the experiments of Bouchard prove that in the presence of intestinal toxemia leucocytosis and tissue resistance are greatly impaired.

Most surgeons for years have recognized from observation and practical experience the necessity of thorough evacuation of the bowels and the establishment and maintenance of a free flow of the secretions for several days before operation, if possible, and do so now. But few live up to the best light that we have in failure to administer intestinal antiseptics, such as charcoal and bismuth, the former of which Bouchard has shown unites with the poisonous alkaloids and ptomaines of the intestinal tract and prevents their absorption and the consequent bad effects on tissue nutrition. Diuretics and cathartics are freely used, but intestinal antiseptics, great as is their undoubted value, are not frequently resorted to.

Another error in technic, and one I believe is quite general, is the failure of sur-

geons to recognize, or at least, to avail themselves of the benefits of microscopical information before operating. I know of a case of joint inflammation which was many times diagnosed as of tubercular character and amputation advised, but which the microscope showed was due to other causes and which simple treatment cured.

In the ideal technic at Johns Hopkins Hospital, the surgeons make daily use of the microscope during operations as well as before, and in many cases the result of the microscopical examination determines the procedure of the surgeon.

Besides the examination of tissues during operation the condition of the blood is determined before and noted in the physical examination chart of the patient. The failure of a surgeon to provide himself with and use these charts on which are noted with the results of the physical examination the operation to be done, constitutes an error in technic.

I know of one case in which the patient was told on leaving one of our large hospitals, that both her ovaries had been removed and her uterus suspended. She continued to menstruate and future disease necessitated the removal of the ovary which had been left behind.

An error I have sometimes noticed is the use of unsterilized vaseline for lubricating the hands or instruments after they had been thoroughly sterilized. I believe another error in technic, too general, lies in the failure of the surgeon to remember that the patient has a skin as well as himself, and while he will prepare his hands and instruments and surroundings thoroughly, he may entrust the preparation of the patient to others, of whose thoroughness he is not sure and to whom he has not given specific instructions.

During operations, the errors which most frequently occur are those dependent on the failure of the surgeon to take his time, study his landmarks, and see what he is doing; on the use of too strong antiseptic solutions; on the failure to check all oozing before closing; on inaccurate closing of the wound and insufficient dressing.—Dr. H. P. Jackson, in *Int. Jour. of Surgery*.

The ether or chloride of ethel spray will sometimes prove quite useful in stopping severe bleeding from cancerous or other ulcerations in which the hemorrhage is rather of an interstitial than an arterial character.

In stricture of the urethra the act of urination, if prolonged, cannot be shortened by the adoption of a special attitude. In enlarged prostate you will find that the patient knows some special attitude in which he is able to urinate most easily and rapidly.

Never treat a severe burn on the flexor side of a joint without applying an appropriate splint to prevent, as much as possible, the occurrence of contraction. The need of skin-grafting is especially great in all burns where the result of contraction would be deformity or disability.

In bony ankylosis there is no pain on voluntary efforts at motion; in fibrous ankylosis there is. In the first, if the physician tries passive motion, the pain is only where his fingers compress the part, in the latter there is pain all over the joint.

In wounds necessitating the ligation of the brachial artery it is well to remember that, while the inner edge of the biceps is the guide to this vessel, the edge of the muscle slightly overlies the artery, and must be lifted up a little to expose the vessel.

It is a good point to remember that in practically all dislocations of the shoulder, the elbow cannot be made to touch the chest on the affected side, whereas in fracture of the neck of the humerus the patient can always accomplish this manœuvre.

In any of the forms of chronic superficial inflammation of the tongue it is unwise to use caustics. These agents commonly increase the irritation. Such cases show a marked tendency towards malignant development, and must always be carefully watched.

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American Association of Orificial Surgeons.

The American Association of Orificial Surgeons will hold its next annual meeting in Chicago, September 18th and 19th, 1901. No live man can now afford to ignore orificial surgery or be absent from this meeting.

W. E. Bloyer, M. D., Pres.,
Cincinnati, Ohio.

Henry C. Aldrich, M. D., Secy.,
Minneapolis, Minn.

The fifteenth annual class for instructions in Orificial Surgery will be held in Chicago during the week beginning September 16, 1901, and will consist of a four hours daily session. For particulars address

E. H. Pratt, M. D.,
100 State St., Chicago.

A young physician, graduate of a first-class homeopathic medical college (1901), wishes to associate himself with an old established practitioner who is in need of an assistant. The applicant is well connected, and fully capable. The editor of the Era is glad to vouch for him. For the first six months he will ask no compensation. Address this office.



That public office is a public trust.

That what you do for another you do for yourself.

That right always conquers—if you give it a show.

That if the devil had his due, where would you be?

That the greatest worry comes from things that never happen.

That we are safe in the possession of no virtue until its practice has become habitual.

That if you tie men to your chariot wheel, you must look with care to the linch pin.

That the difference between riding a hobby and riding a horse is that one can get off of a horse.

That you should give credit where credit is due, but it is much better to demand cash payments.

That one who is caught in a machine is bruised and broken; politics easily becomes a machine; keep clear of its bands and wheels, lest they work thy destruction.

That reforms never come unaided.

That a man can be understood by but few.

That there is joy in seeing one's work grow.

That pleasures strengthen; dissipation weakens.

That you should be slow to take offense, but quick to forgive.

That solitude is unbearable for those who cannot bear themselves.

That friendship is like water, love is like wine; we can live without wine, but not without water.

That a man should always strive to do more than he is able, for by so doing his ability will increase.

That if you would learn whether a man's religion is the genuine article, do business with him.

That men love a leader, for they know that without leadership no human good is possible; but the true leader does much which displeases many, and he is therefore opposed and hated, and is made stronger and wiser by opposition and hatred.

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CH. GATCHELL, M. D., EDITOR

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THE COMMUNICABILITY OF TUBERCULOSIS FROM THE BOVINE SPECIES TO MAN.

The event of the past month in the medical world has been the British Congress of Tuberculosis, held in London. In its proceedings much that was already well known was emphasized, and one new and rather revolutionary doctrine was promulgated. To Dr. Robert Koch again belongs the credit of having attracted to himself the attention of the world.

Koch's proposition is that bovine tuberculosis cannot be communicated to man. But those who listened to him were not ready to accept his teachings. The eminence of Dr. Koch as an expert, and the exaggerated expectations of the public that his discovery of tuberculin some years ago would be a certain cure for this dread malady, leads us to believe a similar disappointment may be in store for those who do not carefully analyze the real effects of this new discovery. For some years past it has been expected by the majority of the educated public that human tuberculosis was, to a certain extent, caused by the consumption of tuberculous animal products, and especially by the use of tuberculous milk among children. Although for obvious reasons no direct experiment could be made to prove this conclusion, yet a sufficient number of startling instances has occurred of human infection closely following the consumption of bovine tubercu-

lous products, to lead to the positive opinion by noted and unbiased experts that there was no reasonable doubt in the matter. This opinion was corroborated by innumerable direct tests proving the communicability of bovine tuberculosis to nearly all of the lower animals, many of them far higher in the scale of life than the bovine.

There can be no doubt about the positive results which have been obtained in the experimental communication of bovine tuberculosis to the dog, cat, sheep and monkey. Gradually following the acceptance of this conclusion, efforts have been made by national, State and city authorities in all parts of the world, at enormous public expense and at considerable loss to individual owners of cattle, to prevent the sale or use of animal tubercular products.

To some extent these efforts have been inaugurated to prevent loss to owners of other cattle, but to far the largest extent the reason of them, with the consequent public support, has been to prevent the spread of the disease from the bovine to man.

It may be asked, what is likely to be the result when the public interpretation of the words of the greatest living expert on this disease already is that human tuberculosis can not be conveyed to bovines, and further, that bovine tubercular products are harmless to man? If this is the true interpretation of his statement, without further or later qualifica-

tions, it means that the public need have no further fear of tuberculous meat or milk; that the repressive measures so severe in many sections of this country, to prevent the sale or use of such meat and milk, are unnecessary; that the enormous amount of money annually expended in the detection and suppression of bovine tuberculosis is wasted in so far as the public health is concerned; and that the future prevention of this disease among animals will be restricted to such measures as may be expedient to obviate individual losses in stock. It will mean the practical suspension of the tuberculin test on all animals intended for international or interstate traffic, and a rapid reversion of the old-time prevalence of the disease, which there is no question these repressive measures have diminished. If the danger to man is now to be considered eliminated, the public will at once demand an end of this expense.

The matter is one of the most important to the public, and the evidence for and against should be very carefully weighed and final judgment suspended until, as Dr. Koch himself so justly recommends, a corroboration of his results have been obtained by other observers. It is, however, furthermore important to accurately consider the true meaning of what Dr. Koch actually has discovered, and the important aspects of the question still undetermined by him. Equally as erroneous conclusions may be drawn as was the case in the discovery of tuberculin, and the fact must not be lost sight of that however expert and clever a man may be as a discoverer, it rarely happens that he is equally clever at drawing logical conclusions from his discoveries.

Let us await corroboration of Dr. Koch's experiments — if, indeed, it is possible to corroborate them.

(From the *Hahnemannian Monthly*.)

THE VALUE OF THE CARDIAC REFLEX IN THE DIAGNOSIS AND TREATMENT OF DILATATION.

BY CH. GATCHELL, M. D., CHICAGO.

PROFESSOR OF DISEASES OF THE HEART AND LUNGS AND OF PHYSICAL DIAGNOSIS IN THE CHICAGO HOMŒOPATHIC MEDICAL COLLEGE.

(Presented to the American Institute of Homœopathy, June, 1901.)

While the superficial area of cardiac dullness can usually be readily demonstrated, it is not always possible by percussion over the area of deep dullness to obtain an accurate knowledge of the actual size of the heart. It often happens that two series of careful percussion outlines, made in the same person and within a short period of time, will vary in diameter from a millimeter to one-half centimeter.

The change in the area of cardiac dullness which often occurs during the process of percussion suggests the possibility that in response to cutaneous irritation applied over the præcordium, a reflex contraction takes place which ultimately causes a marked decrease in the heart-volume.

It has been well known that a high degree of external friction over any organ which has a permanent or occasional approximation to the thoracic or abdominal parietes produces a reflex contraction of the underlying viscus. But it has only recently been demonstrated that the reflex contractility of the heart-muscle gives material aid to the diagnostician in differentiating between various forms of cardiac disease whose manifestations present a closely allied clinical picture.

In order to give a practical turn to the subject under consideration, the cardiac reflex will be discussed only in reference to clearing up obscure and much-mooted diagnostic difficulties.

The above-mentioned ante-mortem variation in the size of the heart seems to be further confirmed by numerous autopsies, in which the apex of the organ failed to correspond to the position outlined during life. Within certain limits this is explained by post-mortem con-

traction and stoppage in systole; but the latter phenomena are not determining factors, except at the time of beginning dissolution and in cadaveric rigidity.

Properly to observe the cardiac reflex a good X-ray apparatus with a low-tension Crookes' tube is required.

For the cutaneous stimulation, any form of counter-irritation may be used.

Abrams, of San Francisco, first advocated the ether or rhigolene spray as being the most effective, but I have found that a brisk rubbing with a hand-brush of the ordinary soft rubber variety is equally effective. After the rubbing has been thoroughly administered for two or three minutes, the patient should be placed in front of the Crookes' tube, and the fluoroscope screen approximated to the chest-wall.

The noise of the static machine, together with occasional induction-shocks, may cause an undesirable increase in the respiratory rhythm; hence the patient should be constantly reassured that no harm can possibly result, endeavoring in this manner to secure a regular and quiet lung-expansion.

Abrams, in his original monograph, states that the reflex is more manifest on the left than on the right side of the heart; but after a close study of the skiagraphic appearance I am not inclined to accept his view, in face of the fact that on expiration the ascent of the diaphragm at the pericardial attachment causes a confusing shadow, which undoubtedly at times gives the appearance of less activity in the lower right segment.

Curiously enough, a heart in massive dilatation gives a most exaggerated picture of diminution in size when reflexly stimulated. Marked percussional evidence can be obtained when the skiagraphic picture shows the lessening cardiac volume; therefore, an area which was markedly dull before the reflex was induced now shows resonance. It is not to be inferred that the volume can be further reduced by increasing the stimulation, for often a slight stimulus produces a greater contractility of the muscle than a manifestly prolonged and severe one. In this connection it might be

well to state that the induction of a marked reflex in a dilated heart is in strong contrast to reflexes obtained in other hollow muscular organs, since in the latter activity becomes impaired just in proportion as the muscular constituents of the viscus become degenerated; and, as in the heart, we know that dilatation cannot exist a great length of time without degenerative changes taking place within the walls.

The prompt action of the cardiac reflex in dilatation of the heart led Abrams to regard the test as absolutely pathognomonic of this condition, and far exceeding all other methods of diagnosis in differentiating a dilatation from a pericardial effusion, since the reflex is said to be absent in the latter condition. This statement, however, will bear considerable modification, as the study of the mechanism of gradual effusion will show.

Obviously, when the effusion is profuse and sudden, percussional evidence of the reflex cannot be obtained. This is not due to absence of the myocardial recession, but to the quantity of fluid in the sac, which, together with the thickening of the layers, constitutes a physical condition which would give dullness, no matter how prompt the reflex might be. But the average case of pericarditis lacks the rapidity of process above mentioned. The friction-sounds present early in the disease are gradually obliterated by the increasing amount of fluid in the sac, and the reflex may be discharged during this period, and in doing so it gives percussional evidence externally.

Thus, it is reasonable to conclude that just in proportion as the fluid increases within the sac will the test be of value. It is a fact that more than half the cases of pericarditis have a small amount of fluid; rarely is there enough to cause interference and death. In the latter class of cases the test is admittedly pathognomonic; in the former class, which, to my mind, form the majority, the presence of the reflex does not by any means preclude pericarditis with moderate effusion. This is well shown in the following case:

Mr. H., age 54; physical examination showing all the signs of dilatation and

valvular incompetence of the left heart. The condition was attributed to a chronic interstitial nephritis. The patient when first seen was in the recumbent position, with much dyspnea and facial cyanosis in evidence. A brisk friction over the precordium was followed in a short time by an appreciable diminution in the deep dullness. This reflex was obtainable at any time to within eight hours before death, although becoming less active toward the end.

On post-mortem, these conditions were all found as diagnosed; but, in addition, the surface of the heart was covered by a shaggy, fibrous layer; the parietal pericardium was rough and granular; the sac itself contained a considerable amount of a sero-sanguinolent fluid, due to co-existing pericarditis. The latter condition, however, did not in any way defer the bringing out of the reflex, nor was it during life suspected as a feature complicating the case.

The cardiac reflex was also obtainable in another case which afterward came to post-mortem: A male, aged 39, was seen three days before death. He was suffering from general military tuberculosis of the large serous cavities. The patient was extremely emaciated; respirations rapid and superficial; pulse irregular and intermittent, from cardiac arrhythmia. After the true dullness was carefully outlined, the precordial skin was briskly stimulated with the ether spray. After waiting two minutes — the time necessary for the lung to recede — a second careful percussional effort brought the dullness considerably within the lines which first indicated the limits of dullness.

At autopsy the oldest of the tuberculous processes was apparently that in the pericardium, as the cavity was partially obliterated by firm, fibrous adhesions, with numerous caseous masses along the line of union of the two layers. Yet, in spite of the limitation of motion the adhesion must have had on the myocardial recession, the heart reflex was present during life.

Thus the recession of the heart-muscle and diminution in volume of the chambers of the heart may be present in

pericarditis obliterans, and in pericarditis with moderate effusion; and it is only pathognomonically absent when the effusion is so great in quantity as to cause death by interference with the heart's action.

The occurrence of the reflex under these pathological conditions of pericarditis and effusion and extreme dilatation of one or both ventricles only goes to show that the inhibitory centers of the heart are powerfully stimulated by cutaneous irritation, whether by flagellation, cold water, or the electric brush. This profound action on the inhibitory mechanism of the heart is furthermore shown by the reduction in the heart-volume by the arrest of cardiac arrhythmia and lessening of the pulse-rate, as well as by evidences of nutritional improvement in the heart-muscle.

I am further convinced that the action on the heart-centers through cutaneous nerve-stimulation is greater and more profound in a therapeutic way than the result produced by the action of digitalis on the inhibitory centers of the heart. Digitalis, although it reduces the volume of the dilated heart, eventually produces a muscular weakness of the heart-wall. The muscular weakness is brought about as a result of the vigorous systolic contraction which the drug induces, without at the same time producing any favorable nutritional changes to compensate for the increased amount of work.

The Schott method of treatment has passed the experimental stage. Its efficacy has been established. It practically constitutes the only treatment in chronic dilatation that holds out any promise of success. But it is important to understand that its efficacy lies, not in the baths, nor in the resisted exercises, *per se*, but the essential element of the treatment to which the improvement of the patient's condition is due consists of the cardiac reflex induced by the cutaneous irritation excited by these manoeuvres. This it does along strictly physiological lines.

It dilatation which has persisted for but a short time more or less myocarditis exists, and it is in this degeneration of the individual muscular fibres, and not in the

valvular lesion, that the danger lies.

It is for this reason that the necessity exists for using measures which favorably influence nutritional metabolism in the heart-muscle before myocardial fibrosis becomes established. This can best be accomplished by the warm bath and friction of the skin — especially over the pericardium — by the hand-brush. This procedure, carried out for ten minutes each day with water at a temperature of 100 degrees Fahrenheit, will prove to be an efficient substitute for the Schott treatment, when for any reasons the latter cannot be given in all its detail.

The fact that any therapeutic agent which does not induce repeated action of the cardiac reflex can have but a transient beneficial effect confines the much-lauded digitalis to a very limited sphere. In this connection, moreover, I refer to the use, and not the abuse, of digitalis. Granted that the occasional exhibition of this drug in dilatation, where incompetence and arrhythmia predominate, results in some good, yet it is equally certain that digitalis, when administered long enough to become cumulative in action, actually lowers the plane of nutritional metabolism in the heart-wall. It can be safely said that if the exhibition of the drug, physiologically, for four consecutive days is not followed by the beneficial results desired, its further use is liable to injure the heart-muscle. The injury follows in spite of apparent improvement, consisting of more vigorous systolic contractions. Such contractions are toxic in their origin, the digitalis being the toxic agent.

In this brief paper I have attempted to establish the propositions that:

- (a) A cardiac reflex does exist;
- (b) The absence of the cardiac reflex in any given case is diagnostic of extreme pericardial effusion, and precludes dilatation;
- (c) The repeated induction of the cardiac reflex, in dilatation, is followed by an improved state of nutrition in the heart-muscle;
- (d) Digitalis, when administered long enough to become cumulative in its action, lowers the nutritional plane in the heart's metabolism.

GASTRIC ULCER.

BY A. E. THOMAS, M. D.

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[The case here reported was demonstrated in sub-clinic at Cook County Hospital.]

Patient Mr. J. S.; aged 41; occupation, common laborer; single.

Present Illness. — The patient states that while working in a store-room, going in and out of the ice-box, three weeks ago, i. e., the 15th of May, he was taken with a pain in the left shoulder. This pain gradually went to the back; then to both ankles. At this time the ankles were swollen so that he could not lace his shoes. About a week ago the swelling gradually decreased and the posterior aspect of the right leg became swollen from the hip to the ankle. Since then the pain has been very severe, especially on motion.

Past History. — Several attacks of malarial fever fourteen years ago; otherwise negative.

Habits. — Takes a glass of beer occasionally; otherwise negative. Family history, negative.

Examination reveals a pretty well developed and nourished middle-aged man. Skin normal and dry. Eyes negative. Tongue clear. Chest expansion equal on both sides. Normal resonance throughout. Normal vesicular breathing throughout. Heart tones distinct and rhythmical. First sound at apex somewhat accentuated. Abdomen at this time is negative. Extremities negative, with the exception of the above statement of the tenderness and swelling.

The diagnosis was sciatic rheumatism; and under the ordinary treatment for such he made good recovery and was convalescing when the present illness occurred.

On May 23d the patient vomited, after which he complained of not being able to take any nourishment except liquids, on account of pain; the vomiting recurred frequently. The vomited matter was acid, with the meats digested, but a

diminished digestion of the starchy foods. He had hematemesis once — vomiting about half a pint of dark-colored blood. He complained of sudden pain and tenderness in the epigastric region, with occasional sharp pain extending toward the back. The pain worse after eating and especially after taking solid foods and as digestion progressed. Appetite poor; takes only about two slices of bread daily. Appetite worse than before commencement of the stomach trouble. Bowels move once in two days. Thirst at times, but none at present. Tongue is coated white. Eructations of gas not offensive, and are accompanied by water-brash.

Results of Examination. — Liver flatness $4\frac{1}{2}$ inches. No enlargement of the spleen. Patient has just taken a cupful of milk, enabling us to outline the stomach perfectly, and there is no abnormal enlargement. The whole epigastrium is very sensitive to pressure, and an area of about $1\frac{1}{2}$ inches in diameter at the end of the ensiform cartilage is extremely sensitive; also posteriorly, an inch to the left of the spinal column at about the tenth dorsal vertebra, is an area that is extremely sensitive.

His pulse at the present time is 72. Average pulse, 72. His temperature is normal. It averages normal, with occasionally a dip to 97.4 and 97.6.

The diagnosis in this case — without a complete examination of the stomach-contents or vomited matter, or examination of blood — would be acute gastric ulcer.

The points upon which the diagnosis is made are:

1st. The beginning of the attack with vomiting;

2d. The regular occurrence of the pain after eating; the pain being very acute in character, increasing during the period of digestion;

3d. The tenderness of the epigastrium is circumscribed — there being a small area of extreme tenderness and the localized area of tenderness to the right of the tenth dorsal vertebra;

4th. The hematemesis;

5th. The pain being aggravated by solid foods more than by liquids;

6th. The examination of the stomach reveals no dilatation.

The fact that the patient has had a hemorrhage from the stomach bars out all forms of acute gastritis. The only thing to do is to differentiate this case from carcinoma of the stomach. The differentiating points of the history as it was taken are:

1st. The vomiting occurring after meals. If this were a case of gastric cancer, vomiting would be likely to occur irregularly, would not be accompanied by acute pain, would be extremely offensive instead of sour, and the albuminous foods would not be digested. In this case we have sour vomited matter with undigested starches.

2d. The pain — increased by pressure — occurring after meals and as digestion progresses, is diagnostic of gastric ulcer; while pain of gastric cancer does not occur regularly after meals, is rarely ever acute in form, and the condition is usually relieved by pressure.

3d. The tender spot in the right of the spine does not occur in gastric cancer, while it is present in over 40 per cent of cases of ulcer, and is very significant. Also, upon examination of the stomach we find evidence that it is not gastric cancer — there being no dilatation, no signs of any constriction of the pylorus, no signs of tumor, and the area of acute tenderness being circumscribed; pressure in this area being almost unbearable.

The points that will determine the diagnosis beyond all possible doubt will be — careful chemical analysis of the contents, which will be made as soon as the stomach is in a condition to allow us to use a stomach-tube. Then if we find — as without doubt we will — the increased secretion of hydrochloric acid and the slow digestion of the starches and increased digestion of albuminoids, we will be sure that the diagnosis is correct.

Going further, we would make an analysis of the blood; and if we find the hemaglobin above 60 in percentage, and the blood-cells not too much changed — there being a diminution in the number of red corresponding to the hemaglobin — we would be further assured that there

is no malignant growth in this stomach; for in gastric cancer the percentage of hemaglobin is always below 60 per cent, while in gastric ulcer it is always above, with little change in the blood-cells.

Etiology. — While the etiology of some cases of gastric ulcer is doubtful, and various theories have been advanced, there is one condition that is acknowledged to be a frequent cause of gastric ulcer, viz., anemia. The causes of the anemia and its exact relation to gastric ulcer have not been fully determined.

In this case we have a previous history of rheumatism; which, according to Ewing, produces anemia. In some cases of rheumatism the red blood cells fall below 4,000,000, and the hemaglobin may fall as low as 65 per cent of the normal. From the appearance of this patient, we would say that he is markedly anemic.

Treatment. — In treating cases of gastric ulcer it is always necessary to observe the rule of the surgeon, and give the injured parts as much rest as possible. With this end in view, the diet is of the greatest importance. The diet that we have found preferable to all others in acute or recent cases is milk diluted with Vichy water — equal parts of milk and imported Vichy, making the best diet known for such cases of gastric ulcer.

To prevent anemia, which rapidly follows ulcer, and in many cases precedes, beef-juice should be given as soon as the acute symptoms of pain disappear; the juice of five pounds of beef should be given each day. Absolutely no solid food should be taken. The patient should not be allowed to exercise or move; neither should the diet be increased or changed from the milk and Vichy — then beef-juice — until all soreness and tenderness of the epigastrium are gone.

Sometimes to alleviate the acute pain which is caused by increased secretion of hydrochloric acid, it is necessary to use alkaline drugs or waters to overcome the hyperacidity. Carbonate-of-magnesia is about the best alkali to use. Its advantages are that it does not furnish chlorides or any acid radical by which the blood can increase the amount of hydrochloric acid; and it keeps the intestinal

tract in good condition. Lime-water, aromatic spirits of ammonia, or chloroform-water internally, are frequently serviceable.

To control hemorrhages in cases of gastric ulcer the first thing to do is to apply an ice-bag over the epigastrium and then give a solution of the desiccated adrenal gland stirred into two ounces of water. Soon after giving the adrenal gland, give 5 to 10 drops of oil of Erigeron. If the hemorrhage is profuse, give hypodermically with this treatment tincture of Erigeron or tincture of China, or Mellefolium — 5 drops at a dose, hypodermically.

No food should be given per mouth inside of 36 hours after a marked hemorrhage.

Of the remedies useful in ulcer of the stomach, we have two classes; those directly homeopathic to the condition of ulcer, and those that may be indicated by change of symptoms as convalescence progresses.

In the first group are Argent. nit., Uranium nit., Arsenicum, Phosphorus, Mercurius cor., Iodine, and Kali bichromicum.

In the second group are such remedies as Hydrastis, Pulsatilla, Nux Vomica, Lycopodium, etc.

In this case one of the first group will necessarily be called for. On account of the acute inflammation present, the acute pain and vomiting, the apparent increase in HC2 as shown by the vomitus, and absence of symptoms calling for any of the other remedies, we will prescribe Argenticum nit. 3x, 2 grains four times a day.

On account of our somewhat limited diet-list, this patient will be put on a milk diet; and the meat juices will be given as they may be obtained.

Prognosis. — Although the large majority of gastric ulcers heal with proper treatment, and even the most dubious are likely to get well, on account of accidents that are likely to occur — such as severe hemorrhage or perforation — the prognosis must necessarily be guarded.

Note. — Subsequent examination of the blood in this case showed the red cells to be 3,800,000; white cells 8,000, and percentage of hemoglobin 60 per cent of normal. The patient made a rapid and uneventful recovery.

100 STATE STREET.

A CASE OF URINARY SUPPRESSION.

BY E. P. MILLS, M. D.

OLATHE, KANSAS.

PROFESSOR OF THE DISEASES OF CHILDREN IN THE
COLLEGE OF HOMOEOPATHIC MEDICINE AND
SURGERY OF THE KANSAS CITY UNIVERSITY.

Some cases we see are of interest because of certain conditions which we find are out of the ordinary, others absorb our attention by reason of the absence of symptoms we have been taught to expect. This case is of the latter class.

The patient, Frank R., aged 4 years, had a good family history. He had suffered with an eruptive disease, some two weeks before, that had been diagnosed as rotheln (but which may have been scarlatina). This was followed by a severe attack of tonsilitis. This kept him in bed until the development of the peculiar condition which I will relate.

On Sunday morning, the 4th of November, 1900, Frank urinated for the last time until between 9 and 10 o'clock the next Friday night. I was called upon by Dr. John Hudson, of Olathe, Wednesday afternoon to accompany him into the country to Mr. R.'s home and administer chloroform for him. While on the way out he detailed the above history to me, and also that in the morning he had attempted, without success, to introduce a catheter into the boy's bladder.

The little patient did not appear to be in need of any professional services. He was lying on the bed playing with some toys and seemed quite happy and complained of no pain. The memory of the morning's seance had greatly weakened his faith in doctors and he objected to any examination which included the pelvic region. There was, however, no distension of the bladder nor any tenderness, except along the urethra, which,

undoubtedly, was due to the irritation of the catheter, as was the swollen and drop-sical prepuce.

The patient came under my care the next day and was put on Apis and was kept on it until after the flow ceased.

Now for the unusual things in the case. There was no complaint of pain, either over the kidneys or the bladder; there was absolutely no cellular infiltration; neither the breath nor the body had the least urinary odor; there was no sensible perspiration, and when he vomited, which he did twice, the vomit was clear of the smell of urine. There was a marked thirstlessness; in fact, he had to be forced to take water at all; the appetite was good and the bowels were regular; he slept well nights and his playthings were not out of commission during the days. No coma nor any sign of a convulsion. The temperature was slightly elevated towards evening.

The first urine passed was in bed, and of course was not saved, but for the next few days a specimen was brought in and a daily examination made of it. For the first few times there was considerable pain on urinating, the result, maybe, of the catheterization. Saturday's analysis was the only one that showed any abnormal quality, and that a mere trace of albumen; the color was a pale straw, the specific gravity 1010. The appearance and gravity gradually came back to the normal until at the close of the week that desideratum had been reached.

The lad made a perfect recovery and at this time is none the worse for his strange experience.

The question I wish to ask is, What took place in the system during the 132 hours? Physiology teaches us that urine is constantly separated by the kidneys from the blood stream, and that formation of its constituents in the tissues is likewise a constant accompaniment of tissue metamorphosis. Usually in suppression the skin takes up the work and tries to compensate for the inactivity of the kidneys, and if that is not sufficient convulsions or uremic coma ends the scene.

THE OVIDUCT.

II. PHYSIOLOGY.

BY BYRON ROBINSON, B. S., M. D.
CHICAGO.

Fluid Secretions.

Fluid secretions from the endosalpinx aid the ova transportation. At all times there is a capillary layer of fluid on the surface of the endosalpinx. In the menstrual activity, during congestion of the oviduct, the fluid, sero-albuminous, increases in quantity. It is alkaline in nature. It is increased by the fluid from the ruptured ovarian follicle and also by

the increased secretion from the perisalpinx. Heil could observe directly under the microscope that the fluid on the endosalpinx produced powerful movements of the ova. The fluid stream in the oviduct is the chief means by which peristalsis can force the ova distalward, and since the ostium uterinum changes its lumen but little, while the ostium abdominale is a closed sphincter, and also with rich edematous folds of the endosalpinx, the fluid stream is likely to move distalward, as the direction of least resistance. The distalward moving fluid stream of the oviduct is doubly effective in ova transportation when enhanced by cilia constantly vigorously whipping and periodic peristalsis powerfully moving distalward. The cilia of the widely expanded fimbriae create a fluid stream from the abdominal cavity toward the ostium abdominale. The secretion of the endosalpinx is rather a serous fluid than a mucous

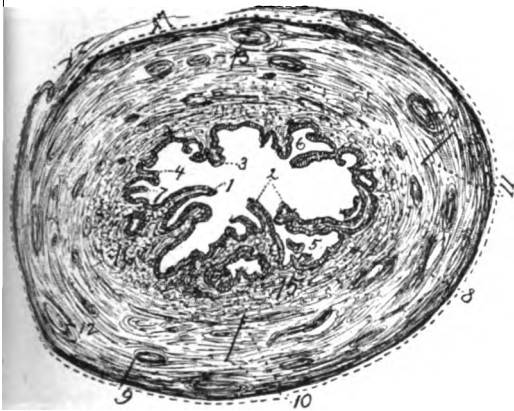


Fig. 5. (Byron Robinson.)

Fig. 5.—The isthmus of a sow. The animal was in oestrus (rut) and the vessels of the oviduct were engorged and distended. The oviducal wall is drawn slightly thicker than it should be.

The dotted line represents the perisalpinx. There are six principal folds, and about the same number of secondary intervening folds of endosalpinx. 1 and 2. Principal folds of endosalpinx. 4, 5, 5, 6 and 7. Intervening non-branched folds. 5 and 6. Show spaces which resemble tubular glands. 8. External longitudinal muscular layer. 9, 12, 13 and 14. Vessels lying chiefly between the circular and longitudinal muscular layers of the oviduct. 10 and 11. Shows by the dotted and black lines the main thickness of the strong, dense, circular muscular oviducal layer in the isthmus. The dotted line represents the perisalpinx. 15 and 16. Represents the vastly congested subepithelial tissue—a myxo-fibrous tissue.

The blood vessels appear to be regulated in general by the muscles of the external longitudinal muscular layer.

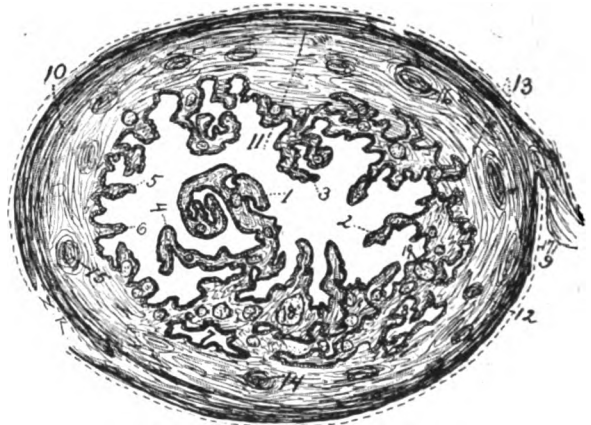


Fig. 6. (Byron Robinson.)

Fig. 6.—The ampulla of a sow during oestrus. The blood vessels of the endosalpinx are engorged and highly distended with blood. 1, 2 and 3. Principal folds. 4. Secondary folds. 5 and 6. Intervening folds. 7 and 8. A space inclosed by glandular epithelium. 9. Mesosalpinx. 10. Longitudinal layer. 11. Circular layer. 12. Longitudinal layer. 13. Marks off by dotted line the strong circular muscular layer. 14, 15 and 18. Vessels. 17. Peritoneum.

The wall is disproportionately thick; however, the section is taken from the distal portion of the ampulla.

fluid, and that it is either reabsorbed or passed through the ostium abdominale into the peritoneal cavity as noted by Kehrer. Fluid distention of the oviduct is accompanied by atresia of both the proximal and distal ends. My microscopic specimens of the oviduct during menstruation show red and white blood corpuscles and coagulated albumen. Hence I shall claim the endosalpinx secreted muco-serous fluid. The layer of fluid on the endosalpinx is perhaps similar or slightly more than that found on the peritoneum or pleura. The secretion found on the endosalpinx is a minimum quantity to secure moisture. When the automatic menstrual ganglia are at their maximum, thoroughly bathed in con-

gested blood, the cilia vigorously whipping and the periodic peristalsis at its height no doubt the secretion of the endosalpinx is much increased in quantity for both man and mammals. So far as I can observe in man, pig and dog this is a fact. It is little use physiologically to observe the secretions of pathologic oviducts. However, it may be rightfully claimed that the oviduct shares in secretion with the menstrual uterus, but only in a slight degree. In my possession are specimens of the menstruating oviduct of a woman about 35, from whom I removed the uterus and oviducts on the third day of menstruation. The condition of the endosalpinx simulates that of the endometrium, except that the

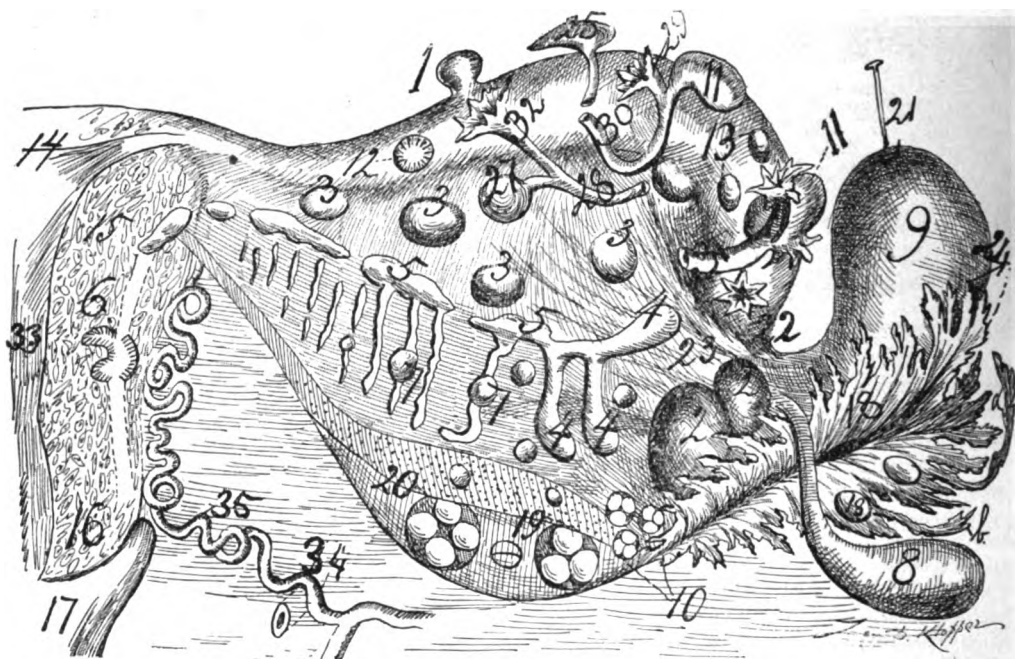


Fig. 7.—This drawing presents the common location of cysts in the ligamentum latum. 1, supro-oviductal cyst. 22, lymph cysts. 3, 3, cysts of mesosalpinx. 44, Koblet's cyst. 55, cysts of the mesonephritic ureter (Gaertner's duct). 6, cyst from remnants of the mesonephritic ureter (Gaertner's duct). 7, cysts of the mesonephritic tubules. 8, hydatid of Morgagni. 9, cyst of proximal end of the oviduct. 10, cyst from dislocated adrenal remnants. 11, cysts connected with accessory oviducts. 12, cyst from invagination of endo-

thelium (or perhaps from rests of the mesonephros). 13, cyst on oviduct. 14, 15 and 16, myometrium. 17, vaginal fornix. 18, cyst of fimbriae. 19 and 20, ovary with cysts. 21, hook in cyst of proximal end of oviduct. 22, accessory oviductal ostium. 23, stalk of cyst of proximal oviductal end being dragged on, both from the mesosalpinx and the oviductal fimbriae. 24, serous surface of fimbriae fixed to cyst. 25 and 27, cysts connected with accessory oviducts. 28, 30 and 31, stalks of a accessory oviducts. 33, cavum uteri. 34, ureter passing distalward. 35, the uterine artery.

changes in the endosalpinx are much less pronounced. The factors observed in this menstruating oviduct are: Excessive red and white blood corpuscles, dilated vessels, precipitated or coagulated albumen, and no desquamation of epithelia. The transportation of an ovum through a dry contracted oviduct would be complicated with difficulty and trauma. A water-way facilitates transportation and minimizes trauma. Sexual practice congests and enhances oviducal secretion.



Fig. 8. (Byron Robinson.)

Fig. 8.—Oviduct of monkey, from the ampulla. 1 and 2. Subepithelial tissue, which is similar to the endometrium except that considerable muscular tissue passes into the primary endosalpingeal folds. 3 and 4. Primary endosalpingeal folds. 5, 6 and 7. Intervening folds. 8. The circular myosalpinx. 9. Longitudinal myosalpinx, which are somewhat interwoven in the proximal end of the oviduct. 10. Perisalpinx, peritoneum (dotted line). 11 and 12. Large vessels in the myosalpinx. 13. Mesosalpinx. 14. Oviducal lumen.

The oviduct of monkey resembles closely that of man.

Peristalsis of the Oviduct.

Peristalsis of the oviduct aids ova transportation. The myometrium and mysosalpinx are identical muscles and the direct continuation of each other. What stimulates rhythm in one will induce the same in the other. Congestion,

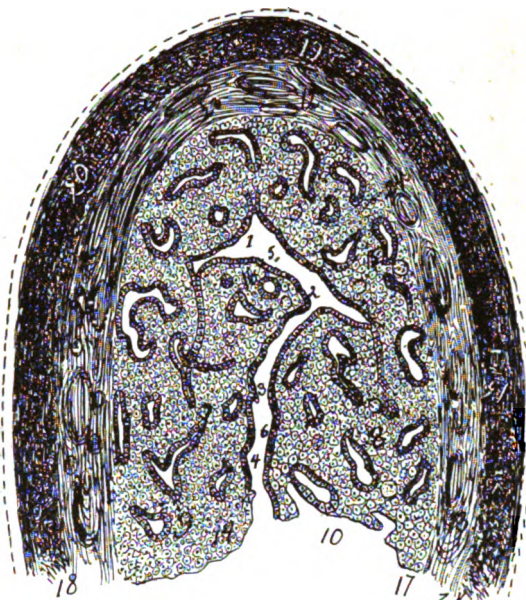


Fig. 9. (Byron Robinson.)

A SECTION OF THE BEGINNING OF THE UTERINE HORN.

Fig. 9.—This is one of a number of serial sections of the uterine horns. The distal portion at 10 and 14 passes into the cavum uteri, so that the distal segment of the horn is incomplete. 1. Proximal lumen of horn. 2. Shows bulging of the endometrium into the cornual lumen. 3, 6 and 5. Show the single layer of cornual epithella. 4. Is distal lumen of horn. 7 and 8, 14 and 17. Point to the embryonal tissue of the cornual endometrium. 9, 10 and 15. Point to cornual utricular glands, which do not show the regularity that is noted in the corporeal endometrial glands.

Also we do not observe the superficial straight layer and the fundal sinuous layer so distinctly marked as in the corporeal utricular glands. 11, 12 and 13. Show uterine muscles surrounding the endometrial horn. 22, 23. Points to vessels in the cornual myometrium. 18, 19, 20 and 21. Points to myometrium, rich in vessels.

pregnancy or a foreign body in the uterus produces in it almost continual rhythm, (a) Congestion of the mysosalpinx produces persistent rhythm or oviducal peristalsis, which is easily demonstrated in slaughtered mammals, especially during oestrus or run, or by placing recently removed human oviducts in a one per cent sodium solution. Light taps on the oviduct with the scalpel or pricking with its point starts an oviducal rhythm which appears to progress distalward. Hyperemia, pathologic, does not appear to act on the oviduct like menstrual rhythm. Congestion facilitates genital export service. Here a menstrual congestion of the oviduct produces a rhythmical periodic peristalsis of the mysosalpinx, which forces the ovum distalward.

The mysosalpinx is stimulated to periodic rhythmical peristalsis by gestation, the menstrual congestion, and secretion contents of the oviduct. The peristalsis of the oviduct appears to travel distalward, which aids to force the floating ovum distalward also. Its peristalsis resembles that of the enteron and colon. At menstrual periods the swollen congested endosalpinx is chiefly manifest in the ampulla, but the edema and swelling of the endosalpinx is very limited in the isthmus and pars intra-murale; therefore, the distal lumen of the oviduct will remain quite patent while the proximal end will be quite filled with luxuriant edematous folds of endosalpinx, and besides it is well fortified by the abdominal sphincter, always actively functioning during congestion; hence, oviducal peristalsis will force the fluid stream in the direction of the least resistance, which is through the patent lumen of the distal end.

The bird's large ovum is forced through oviduct almost entirely by peristalsis. I have not sufficient confidence in anti-peristalsis to give it space. It consists generally of wild and disordered movements.

5. The Contraction or Shortening of the Fimbriae Ovarica.

The contraction or shortening of the fimbriae ovarica is an important factor in securing an ovum for transportation.

The cow, mare and monkey are the best animals in which to observe the process, because they resemble man in possessing no peritoneal ovarian pouch. The process, as I observed it in some of these animals and in man, is the following: The fimbriae ovarica contracts and its mucosa as well as its musculo-ligamentous apparatus swells and thickens. The swollen infundibulum approaches and applies itself to the ovarian surface, and the contact of the infundibulum to the ovarian surface is maintained by a tenacious, sticky mucus which extends in prolonged mucous threads when the infundibulum is forcibly separated from the ovary. The edematous, enlarged fimbriated infundibulum in menstruation is actually found glued to the ovarian surface within which field a mature ovum may or may not be found. The mucus in the center of the infundibular field is thinner or more fluid than that of the circumference, allowing the cilia to more easily whip into active current in the center of the field and start the ovum floating toward the uterus.

Some have thought that the approach of the fimbriated infundibular surface toward the ovary was due to erectile tissue, but it is probable that it is due to contraction of the muscle-cells in the fimbriae ovarica, swelling of the fimbriae, and maintained by sticky mucus. These views I gained by operations on women at the menstrual period; also, observations of slaughtered animals, especially cows, and pigs. The mucosa of the fimbria ovarica passes ciliated epithelia which whip toward the uterus. In addition to this, autopsies and peritoneal section show that the infundibulum may lie in contact with the ovary not only at the menstrual period but at any time, so that the function of applying itself to the ovary is slight in movement and consists chiefly of secreting the mucus by which it sticks to the ovary. The approach of the infundibulum to the ovarian surface at the menstrual period is not only due to the contraction of the fimbriae ovarica, but to congestion, edema, enlargement and elongation of the fimbriae and the ovary.

6. The Muscular Processes Found in Mesosalpinx and Ligamentum Latum.

The muscular processes found in mesosalpinx and ligamentum latum, aid in ova transportation. By careful dissection muscle bands may be noted in the fixation apparatus of the uterus and oviduct. Rouget is accredited with pioneer work of discovering and describing the muscular processes. In congestion, as menstruation, all the muscles of the internal genitals are excessively bathed in blood and induced to make rhythmical periodic contractions which aid to increase oviducal motion and peristalsis. These muscles of the fixation apparatus of the internal genitals lend to them tone, invigorating the action of the mesosalpinx and ligamentum latum, thus aiding in ova transportation.

7. Mucus Fixes the Pavillon to the Ovary.

The menstrual congestion induces the secretion of sticky mucus, which glues the fimbriae of the infundibulum to the ovarian surface. I have seen the fimbriae stick to the ovarian surface by liberal supply of mucus in menstruating women while abdominal section was being performed. On forcibly separating the infundibulum from the ovarian surface the mucus was prolonged into elongated threads. This mucal secretion aids the fimbriae to fasten to the ovarian surface until the rupturing ovum has sufficient time to enter the infundibulum and the proximal oviducal ostium whence the transportation begins in earnest.

A STUDY OF STROPHANTHUS HISPIDUS.*

BY GEO. ROYAL, M. D.
DRS MCINES, IOWA.

Strophanthus belongs to a family of heart poisoners, and has most loyally sustained the reputation of the group. Like many others of our remedies, its field of usefulness is both narrow and obscure because the drug has not been sufficiently proven; in fact, I might say, has not been proven at all. It is true that Dr. Piedvasche's four cases are recorded in the *Cyclopedia of Drug Pathognesny*, but

* From Transactions of the American Institute of Homoeopathy, 1900.

note that he says: "We made four provings of *Stro.* on healthy persons, with the aid of the sphygmograph, with the view of endeavoring to form a personal opinion as to its influence on arterial tension."

There are only three symptoms in Dr. Piedvasche's province which do not refer directly to the subject he had in mind, viz., "Arterial tension." Two of these are so general in character as to be of no value. The third, viewed in the light of clinical experience with the drug, is a characteristic symptom. It reads, "The quantity of urine fell, after the first two or three days, about one-third."

When asked by our chairman to write on this subject, I decided to study all reported cases of cure for the purpose of ascertaining what the concomitant symptoms are.

I realize that a symptom secured at the bedside, unless it be a verification, is of but little value compared to a symptom secured by a scientific proving. Nevertheless, such symptoms may assist us in determining the use of a drug until the drug is thoroughly proven.

Before passing to the clinical symptoms, let me, for the purpose of refreshing your memory, briefly state the result of Dr. Piedvasche's experiments. He gave the drug to four individuals whose ages were 28, 23, 15 and 11 respectively. Fifteen drops of the tincture, 1 to 20, was given in two doses, at 2 and 4 p. m. In the first proving at 9 p. m., "the pulse-rate 1-9 slower. The ascending curve unaltered, apex more rounded, descending curve, not only more prolonged, but slightly convex. The physiological dirotism has entirely disappeared." The same dose was repeated for four days. After which, the record states: "No irregularity but notable inequality of the arterial pulsations, which were scarcely bounding; ascending line not only very short but extremely oblique and continued descending by a curve of very lengthened radius."

"After a repose of 24 hours, and after the cardiac action had recovered itself and the curve had regained its normal height, although resembling the arc of a circle with no trace of dirotism, the same

dose was repeated." Result: First day, "The curve still more closely resembles the arc of a circle. Intensity of cardiac impulse somewhat augmented." Second day: (without repeating dose), "Curve completely altered; ascending line nearly vertical, rising to double its original height; summit very rounded; descending line still somewhat convex; slight diastole. Pulse was somewhat quicker than naturally. The quantity of urine fell, after the first two or three days, about one-third."

The second prover took the drug only one day, i. e., the two doses. "At 9:30 p. m. summit of curve more elevated, and ascending line quite vertical. Pulse was somewhat slower. At 8 a. m. next day, "tracings normal, save for a visible increase in diastole." Prover No. 3. "The tracing taken before administering the drug was remarkable for a diastole, not pathological but comparatively enormous." "After the usual doses the curve was found a very little higher; ascending line short; summit rounded, descending line very long and bulging, without trace of diastole in most of the pulsations. Frequency of pulse less by 1-6. The next day without drug. "Return to normal state, save that cardiac impulse is slightly diminished."

Fourth proving: "The preliminary tracings showed the "summit of curve a little rounded." Although the usual doses were taken for two days the evening tracings showed no alterations, but on the evening of the third day the medicine, having been taken as usual, "curve was found rounded to a convex plateau, and the descending line raised and bulging." The drug was repeated for two days more, but no record. On the following day (no medicine taken): "Summit much raised, ascending line nearly vertical, considerable increase in frequency of pulse." The day following, Nov. 30th, doses repeated. "Pressure becoming strong again, and curve resembling the arc of a circle." Dec. 2d, "curve continues rounded, but pressure tends to diminish, ascending line being vertical instead of oblique and frequency of pulse being increased." Dec. 3d, "Same trace

with lowering of force of cardiac impulse."

Please note these points of the provings:

1st. That the primary action slowed the pulse.

2d. That soon after the drug was discontinued, a reaction set in, and the frequency of the pulse was increased for a time, before returning to normal.

3d. That evidence of the physiological diastole was obliterated.

4th. The quantity of urine was decreased.

From accidental provings in toxic doses we learn:

1st. That the muscles of the body, especially those of the heart, contract violently, then pass rapidly into the rigidity of death.

2d. That the reaction of muscles changes to acid.

3d. That the kidneys become hyperaemic, not only in the cortex and medullary portion, but especially at the tips of the pyramids.

Also that it will produce temporal headache, accompanied by double vision; impaired sight; nausea; vomiting; flushed face; eyes brilliant; pupils dilating and contracting; convulsions preceded by debility; paralysis progressing from center to periphery.

The experiments on animals lead to the conclusion that the drug acts directly upon the heart muscles as it acted equally well upon frogs after the cord and medulla were completely removed. However, some of the above symptoms from toxic doses prove as conclusively that it also acts upon the nerve centers.

So far, the observers have had but little difficulty in reaching an uniform conclusion. But when we take up the clinical reports, all is confusion. One observer warns us against its use, if the patient have any disease of the kidney. Another assures us that the best results are obtained only when some kidney lesion complicates heart disease. The same difference of opinion is expressed in regard to disease of the respiratory organs. Then we find some who report it useful in acute diffuse nephritis, but injurious

in chronic Bright's disease. Some report cases purporting to show that it will kill a patient who has a weak heart complicated by edema of the lung, others have found it the best remedy we possess for just such cases. "A says it will always aggravate a case of heart disease if the myocardium is the seat of the lesion but will relieve all cases when the valves are involved. B reverses A's decision," etc., etc.

While we endeavor to bring order out of all this confusion, I want you to note two more facts in addition to one already stated. I will put them in the following order:

1st. *Strophanthus* has a primary and secondary action.

2d. Some of the observers used 5 to 10 drops of the tincture, while others used the 3x and even the 12x.

3d. Some gave it to bridge the patient over a crisis, i. e., immediate relief, while others gave it for permanent relief.

Bearing these three points in mind, let us begin with the kidneys in our search for concomitant symptoms.

In chronic hyperaemia, it has been used in five-drop doses of the tincture to stimulate the heart. In most cases it increased the flow of urine, relieved the dropsy, and the patient was improved for a short time, but notice that invariably the physician was obliged to give *Strychnia*, *Phos.* of *Strych.*, *Nux vom.* and *Phos. acid*, *Phos.*, etc., for a long period of time after the *Strophanthus* was discontinued. It has been used in the dilution in similar cases with the result that the flow of urine was increased; the dropsy relieved, and the general improvement continued without a reaction calling for *Nux.* *Coffeine*, etc.

In the acute nephritis, it has been used to stimulate a "weak, soft, irregular heart," in doses of from 5 to 8 drops of the tincture. No reports of it in the dilutions found. No beneficial effects are reported from the tincture in such cases in which it does not seem to act as a diuretic. The weight of testimony is to the effect that it is injurious rather than otherwise.

In chronic diffuse nephritis it has been

used in doses of from 2 to 8 minims of the tincture, also in the 1x, 2x and 3x. In most cases the heart's action was "weak." In a few cases this was not true. The results were almost identical as those obtained when given for chronic hyperemia, viz., the large doses increased the flow of urine, decreased the dropsy, caused a general improvement only to be followed by a reaction which frequently endangered the patient's life; a reaction which necessitated the use of *Strychnin*, *Digitalin*, *Cactus*, etc. When given in either the 2x or 3x, the first effect was an increased flow of urine; decrease of the dropsy, also of albumin, casts and crystals. And what is of greater significance, the improvement thus secured lasted for a remarkably long time before the disease resumed its fatal course. Of the few cases reported in which the heart was not "weak," one or two seemed to be aggravated by the large doses of the tincture, but not affected by the dilutions, while the other cases were apparently not affected at all. The reports of its use in diseases of the respiratory organs are in line with those on diseases of the kidneys. It has been given in 5 and 8 drop doses of the tincture; also in dilution, for the purpose of stimulating a heart which was weakening during pneumonia, congestion, or edema of the lungs, also for cardiac asthma. The large doses have hastened the very catastrophe which they were intended to avert. The small doses, i. e., dilutions or even the tincture in the fractional part of a drop, have, in most cases, produced favorable results. The edematous condition is the one which has yielded most frequently, especially when the edema was preceded by dropsy of the extremities, and scanty urine. In such cases the edema of the lungs was the first symptom to disappear with the increase of the urine. The relief of the dropsy followed. For asthma, when the dyspnea was marked, the pulse rapid, soft and irregular, the 1x and 2x seemed to act better than the tincture or dilutions higher than the 2x. The cases in which it aggravated or proved fatal were those of pneumonia, when a large portion of the lungs were solidified. In one case death occurred about ten minutes after the

first dose of 8 drops of the tincture. The heart ceased beating, in another case, immediately after the second of two doses, of five drops of the tincture, which had been repeated two hours after the first.

The reports showed that the habits of the patients played a very important part in producing concomitant symptoms. It is true, not only of *Strophanthus*, but of all remedies, that what a man does where he lives, what and how he eats and drinks, constitute a very large factor in the totality of symptoms. The reports were not very elaborate in this respect, but enough so to show that *Strophanthus* did good work on patients who, either were using, or had used, alcohol, tea or tobacco to excess. Patients whose hearts had been damaged by rheumatism constituted the next most favorable class. The combined effect of the two causes produced the typical *Strophanthus* patient. If we keep in mind the fact that *Strophanthus* acts directly on the muscular fibers of the heart, also remember the effect of the above-named stimulants on the same tissues and then apply our knowledge of *similia* in tracing cause to effect, we can readily grasp the significance of the reports in this particular.

From my study of the provings, and of clinical reports, as well as from personal observation, I would sum up the symptoms of *Strophanthus* as follows:

The patient's muscles were once firm.

Alcoholic and other stimulants have been used to excess.

The patient has suffered from rheumatism, which has left deposits in the heart muscles.

The heart's action is weak. The pulse is accelerated.

The diuresis is lost. The urine is scanty and often contains albumen, tube casts and crystals. The lungs are congested or edematous. There is marked dyspnea. The vision is impaired or double. The lower extremities are painful, heavy, dropsical.

To put the totality of symptoms, in other words, I would say: Give *Strophanthus* when the muscular fibers of the heart have been made brittle by rheumatism deposits or by the prolonged and excessive use of alcohol, tea or tobacco;

when this condition of the heart muscle has produced a weakness which has interfered with the venous circulation, and has thereby caused passive congestion and an inflammation of the kidneys which in turn has caused a decrease of the secretion of urine with the resulting dropsical swelling of the extremities, edema of the lungs, impaired vision, etc.

The importance of the proper administration of a remedy has been very clearly brought out by the study of these reports. The results of the size and repetition of the dose has been shown, and in some cases with startling results, as has already been stated. Why any physician, with even a little knowledge of the action of the drug, should give it in either 5 or 8 drop doses of the tincture to stimulate the heart, when a large portion of the lung tissue was solidified, is beyond comprehension. He certainly did not know that the muscles of the heart were brittle, or he forgot that *Strophanthus* would cause contraction so violent as to snap and kill even healthy muscles. Nevertheless, it was given in such doses and with fatal results.

The drug should be administered in solution and by the mouth, not with a hypodermic needle. The dose should not be repeated too often.

The drug should be continued for some length of time. The remedy acts with comparative promptness.

In nearly all cases the first evidence that it was acting favorably was an increase in the amount of urine. The pulse rate became slower and the volume better. The edema and dropsy then disappeared.

The pulse was usually the last to return to the normal state.

In closing, I want to say a few words to you who persist in the pernicious practice of palliation.

As compared with *Digitalis*, *Strophanthus* has the following advantages:

1st. It is more powerful 1 to 10,000,000 of *Strophanthin* being equal to 1 to 4,000 of *Digitalin*.

2d. It is more constant in its action.

3d. Its action is not cumulative.

4th. It does not derange the stomach as does *Digitalis*.

SURGICAL ERA

CHAR. ADAMS, M. D., EDITOR

CHICAGO, AUGUST, 1901

ANESTHETICS AND CARDIAC DISEASES.

In the "American Journal of the Medical Sciences" for August, 1901, are to be found a series of articles by Finney, Stengel, Mayo and Hare on the use of anesthetics in patients having heart disease. We have also had recently the pleasure of reading the second edition of "Anesthetics and Their Administration," by Dr. Frederic W. Hewitt of London. This book is the result of a very considerable experience with anesthesia, as the author for many years has been anesthetist to some of the larger London hospitals. "T'were a consummation devoutly to be wished" that all amateur anesthetists might, through study of this opportune literature, be brought to a knowledge of what they do not know of this highly important subject. From a not inconsiderable experience with anesthetics and anesthetists we are satisfied that the subject does not receive the attention to which it is entitled in the course of instruction in our medical colleges. Teachers of anesthesia, as a rule, deal mostly with general principles, leaving the numerous details, upon the close observation of which safety depends, to be learned from that most costly of teachers, experience. Clinical instruction in anesthesia has been a feature in our own course for some years and should be in every college. The general practitioner should be thoroughly educated in the use of anesthetics as emergency work and not only in the details of administration but also in the appropriate selection of the agent. We are free to confess that we have often been amazed at the reckless-

ness evinced in the use of chloroform or ether by individuals whose total experience in administration covered no more than a dozen cases. It is to be hoped that more attention will be given to anesthesia as a specialty, and that the fact may be generally recognized that the proper administration of an anesthetic requires the same special study and training as does the proper performance of an operation. It is not our purpose to elaborately review the new literature to which we have called attention, but rather to present to our readers the conclusions as to the choice of the anesthetic agent in operative cases in which cardiac disturbances are present. Finney's paper is based upon the study of one hundred and forty-two cases of patients suffering from different forms of heart disease, and operated upon for different troubles, minor and grave. Of the one hundred and forty-two cases, including organic and functional diseases, there were eight cases of myocarditis. To seven of these ether was given; to one, chloroform and ether. Five took ether badly and three took it well. In the case to which chloroform was administered, it had to be discontinued and ether substituted.

There were seven cases of aortic insufficiency. Four were operated upon under ether; in three herniotomy was done under cocaine. All bore the anesthetic well.

There were six cases of mitral stenosis, four of which took ether, two cocaine, and one chloroform. The operations were all major operations, and all bore their anesthetic well.

There were two cases of aortic steno-

sis. In each a complete operation for carcinoma of the breast was performed. Both took their ether exceptionally well, and at the end of the operation little change was to be noted in the condition of either.

There were forty-nine cases of mitral insufficiency, to thirty-eight of whom ether was administered, to nine cocaine, to two chloroform. Five took the ether badly, and five did not take it altogether satisfactorily, although no anxiety was felt during the course of the administration. The nine cocaine cases, consisting chiefly of herniotomies, all did well.

There were seven cases of simple hypertrophy, chiefly athletes. Five took the ether well. The sixth, who was operated upon twice, took the ether badly both times.

With functional heart murmurs there were forty-six cases, of whom forty-two took ether, two cocaine and two chloroform. Of these, seven took the anesthetic badly.

There were four cases with a basic systolic murmur, the cause of which was not definitely determined. All took ether; one took it badly.

There were nine cases of arrhythmia, with no other lesion to be made out. All were given ether; all took it well but one, in whom the irregularity of the pulse became more accentuated, but not alarmingly so at any time.

Of twelve cases (the whole number of complete excisions of the breast for carcinoma, in which heart lesions existed), eight cases of mitral insufficiency, two of aortic stenosis, and one each of mitral stenosis and aortic insufficiency, all took ether well. Of twelve control, normal cases of the same operation, selected at random under as nearly as possible the same conditions, all took ether well. Of six herniotomies under infiltration cocaine anesthesia, but one exhibited any unfavorable symptoms due to the cocaine. Of six control herniotomies, two exhibited symptoms of cocaine poisoning.

Of thirty-one cases of herniotomy in patients with various forms of heart disease, fifteen of whom were operated upon under ether, twelve under cocaine,

one each under chloroform and cocaine, and two under a combination of chloroform and cocaine, all but two bore the anesthetic well; one case of mitral insufficiency developed a rapid, thready pulse and some cyanosis, which gradually disappeared after the withdrawal of the anesthetic. The other was a case of strangulated hernia which collapsed under ether and later developed a pneumonia.

Of nine cases in whom the appendix was resected, where a lesion of the heart existed, all took their ether well save one, whose pulse became weak and irregular, and respiration shallow, with some cyanosis.

It is manifestly impossible from so few cases to draw any very definite conclusions. But it would seem from a study of these one hundred and forty-two cases, that in the myocardial affections only do anesthetics exert any markedly bad effects. In valvular disease their influence is very slight, but yet appreciable. In functional disturbances insignificant. The conclusions reached by Finney agree with our own experience and that of Mayo, who writes on "Pre-existing Heart Disease in Reference to Surgical Operations." He says: "Myocarditis is the condition which the surgeon has reason to fear. There are often no signposts of danger, and the first intimation of trouble is the sudden death of the patient upon the operating table or shortly afterward. It may happen that the operation was performed for the relief of some condition which in itself was not serious, and which would not have been undertaken if knowledge of the heart disability had been previously obtained. * * * Fortunately, the large majority of cases do give signs and symptoms which, if looked for with care, will enable the surgeon to detect the possibility of disease, and in the later stages the diagnosis may be self-evident. Cardiac symptoms after middle life not plainly pointing to valvular lesions are probably myocardial in origin." Mayo calls attention to the diminished reserve force of the heart entailed by myocarditis and points out that many of the unexpected and sudden deaths which take place at or soon after an operation are due to this

cause. Myocardial lesions may be secondary to obstruction of the circulation by the pressure of large tumors, especially uterine myofibromata. Fatty degeneration of the heart results in some cases from exophthalmic goitre.

H. A. Hare, in dealing with the subject of "The Safest Anesthetic to Use in Organic Disease of the Heart and Vessels," calls attention to the fact that very few people die from the effect of the anesthetic in the presence of cardiac disease. Relatively speaking this is true. He also speaks of the impossibility of knowing the precise quantity of the anesthetic agent taken by the patient and the danger of over-dosage in the presence of irregular respiration. He indicates the necessity for examination before operation of the cardio-vascular conditions and says in this regard: "In many instances where there is high arterial tension the administration of ether is contraindicated. Ether increases the arterial tension and stimulates greatly the cardio-vascular system. So I doubt whether in high tension of the cardio-vascular system it is wise to administer ether, though I believe it is as a rule the safest anesthetic. In regard to the condition of the blood-vessels, I believe American physicians do not employ atropine often enough in the stimulation of the vasomotor system. I have given it frequently in cases and in experiments upon animals. It checks the excessive secretion in the upper air passages and prevents the tendency to edema of the lungs. Where the respiration is difficult from apparent edema or diffuse capillary bronchitis it causes a disappearance of the disturbances in breathing which is little less than extraordinary." * * * Ether is usually contraindicated in grave vascular disease, in atheromatous conditions, in high arterial tension due to vascular changes. Hare does not think ether is strongly contraindicated in Bright's disease if it is impressed upon the anesthetist that the kidneys are affected and that the ether is to be given with the necessary precautions. In this regard we would say that we know of no precaution save that of giving as little ether as possible of any avail in such cases. We can

recall several cases in our own experience wherein a chronic Bright's disease with slight symptoms has undergone acute exacerbation following the use of ether. Our author considers the use of chloroform in the presence of myocardial change as very dangerous.

A. Stengel, in his paper on "Cardiac Accidents After Anesthetization," expresses the opinion that there is little to warrant the belief that the administration of anesthetics in the quantities used by surgeons is capable of producing inflammatory disease, excepting, perhaps, of the myocardium, and that proof of the capability of chloroform to produce fatty degeneration of the intima of the blood-vessels and of the myocardium is questionable. He reviews the subjects of valvular and myocardial disease and points out the difficulty of differentiating between the effects of the anesthetic and those due to the operation. Stengel makes the following tentative conclusions:

1. In all cases of cardiac disturbances after operation it is difficult to determine whether the result was due to the anesthetic or to the operation.

2. In many cases of recognized cardiac disease the administration of ether has a temporary beneficial effect upon the cardiac condition. It is not improbable, however, that in some of these the secondary effect is an unfavorable one, the symptoms occurring after a lapse of some days.

3. It is important to recognize that certain results following operations, such as basal pneumonia, gastro-duodenal disturbances, and especially embolism, are in reality the results of a weakened state of the heart, and that they may, therefore, owe their development to the anesthetization or to the shock of the operation.

4. The untoward effects of anesthetics are, I believe, due to the disturbance of the nervous mechanism or the essential muscular automaticity rather than to organic changes in the myocardium, endocardium, or pericardium.

From the foregoing it will be seen that extraordinary care in the administration

of anesthetics in the presence of cardiac or vascular lesions is necessary in all cases of myocardial troubles and vascular degenerations, and, further, that in these cases ether is to be preferred to chloroform. Hewitt sees no difference as regards safety between valvular and myocardial conditions, expressing himself as follows: "Patients with valvular and cardiac affections may be anesthetized with safety if care be taken to select the anesthetic most appropriate to the case and to administer it in such manner that no undue strain is thrown upon the heart. * * * The remarks here made with regard to valvular cardiac affections apply with equal force to cases in which fatty or other degenerative changes are present in the myocardium. Provided that the respiration be kept free from embarrassment the 'fatty heart' is not injuriously affected by anesthetics. Any asphyxial strain upon it, however, may quickly impair its action and lead to syncope the usual course of events which arise during the struggling stage. Moreover, surgical shock is more likely to assume grave proportions in cases of advanced cardiac degeneration than in others." It is not likely that we shall ever be able to formulate a set of rules by which anesthesia may be made a perfectly safe procedure. There are insuperable difficulties in the way of such formulation. Idiosyncrasy, shock, hemorrhage and other factors of undeterminable value will always interfere with an absolute estimate of the effects of anesthetics. The greater our experience the more certain are we that the price of safety in the use of anesthesia is eternal vigilance. No single symptom can be relied upon. The anesthetist should give his undivided attention to the administration and be cognizant of every fluctuation in the patient's condition. The precautions to be taken are — careful selection of the anesthetic — gradual administration, guarding particularly against over-dosage during the struggling stage — unceasing watchfulness of all symptoms, condition of pupil, color of skin, and the character of the respiration and pulse, throughout the entire period of anesthesia.

SELECTED

REGIONAL MINOR SURGERY.

BY GEORGE G. VAN SCHAICK, M. D.

ATTENDING SURGEON TO THE FRENCH HOSPITAL
AND TO THE ST. VINCENT DE PAUL ORPHAN
ASYLUM, NEW YORK.

The treatment of pleuritic effusions depends, to a very large extent, upon the nature of the contents of the pleural sac.

Hydrothorax. — The presence of serum within the pleural cavity may occur as a result of wounds which penetrate it, whether inflicted by a sharp instrument or by the ragged edge of a broken rib. In the latter case the pleura may be thus injured without any penetrating injury of the cutaneous and muscular surfaces of the chest. Pleurisy with effusion also arises in consequence of inflammatory processes unconnected with traumatism. The pathological researches of the last few years tend to convince us that non-traumatic pleurisy with effusion is, in perhaps a majority of instances, of a tubercular nature. Knowing, as we do, the comparatively benign nature of tubercular processes when confined to a serous cavity, the fact that so many cases go on to a more or less perfect recovery need not militate against this view.

Treatment. — That a pleuritic effusion of small extent is often absorbed in the course of a short time is an unquestionable fact. Hence, in a patient whose effusion is quite limited, and the level of which does not rise, it is perfectly justifiable to wait for some time. Under the influence of diuretics, diaphoretics and cathartics, a certain number of cases will get well spontaneously. If, however, the effusion is considerable in extent, showing no tendency to rapid absorption, it is a mistake to wait, and the effusion should at once be evacuated.

The writer desires to insist upon the fact that emptying the pleural cavity is an operation that brooks no delay. If done at all, as it must be in most cases, safety lies in early interference. If the chest is allowed to completely fill with fluid, thrombosis of the veins is likely to occur. Cardiac syncope is also far more apt to follow tapping when the lung has been compressed for a long time.

Aspiration of Hydrothorax. — Boil all the instruments to be used, and then place them in an anti-septic solution. Scrub the chest and axilla with soap and water, then with a carbolic acid solution. Spray the spot where the puncture is to be made with chloride of ethyl, or inject three or four drops of cocaine solution, not stronger than one per cent.

The point to be selected is either in the eighth intercostal space close to the angle of the scapula, or else in the axillary line, in the sixth intercostal space just in front of the edge of the latissimus dorsi. In some cases the operator can

demned. This practice is responsible for most of the fatal results of this operation.

The needle is to be withdrawn as soon as a troublesome cough begins to occur. If the effusion is very large, not more than one-half is to be evacuated. At the slightest sign of fainting remove the needle and cause the patient to lie down. As soon as the needle is removed seal the opening with collodion, and keep the patient very quiet.

Strong evidence that the effusion may be of tubercular origin may be good cause for non-interference, as the col-



Fig. 1. Site of puncture in eighth space behind. (This space should have been represented as nearer to the angle of the scapula.)

choose any point where bulging is prominent, as may occur in late cases, and where dullness is marked. It is well to place the free end of the tube at the point of exit of the fluid in a vessel containing an aseptic and non-irritating solution, so as to provide for the possibility of an error by which the suction might take place in the wrong direction. If the needle should be blocked up by fibrin, it may be cleared by a stylet, or the suction may, for a few seconds, be so reversed that a flow of aseptic fluid occurs from without into the pleural cavity.

Washing out the cavity, through the needle of the aspirator, either with bland solutions, or with those containing iodine or other antiseptics is to be strongly con-

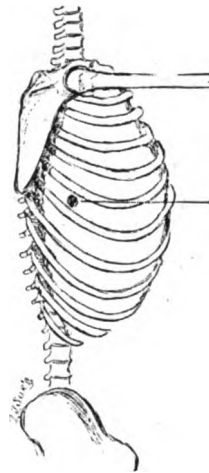


Fig. 2. Site of puncture in axillary line.

lapse of the affected lung tends to hinder the development of a bacillary infection.

The presence of bloody fluid in the pleura, excepting in cases of hydrothorax following penetrating wounds, points to the probability of tuberculosis or of cancer. In any case a distinctly bloody fluid would indicate the propriety of non-interference with the effusion.

Empyema. — The presence of pus within the pleura calls for removal of the effusion. In some cases, and rather most frequently among children, in whom the disease has existed for a long time, the pus may point to the surface and make its exit spontaneously. This most often happens about the third intercostal space not far from the sternum, but the writer has observed this occurrence nearly on a level with the diaphragm.

In empyema the use of the aspirating needle is to be condemned. If the fluid is to be evacuated, nothing but a free opening into the pleura is to be considered. The writer prefers to open in the seventh space, anterior to the border of the latissimus dorsi. Make an incision at least two inches long, and open the bulg-

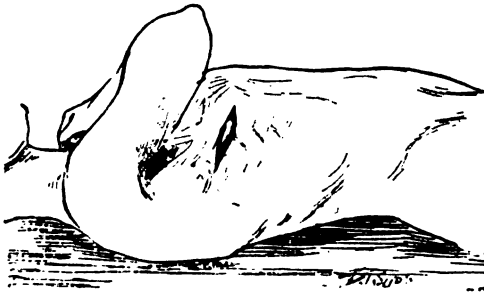


Fig. 3—Incision for Resection of Rib.

ing pleura freely. Washing out the pleura at once is not recommended. It is at least useless, and may cause syncope or shock. If the pus is fetid and sanious, washing out may be done the day after, but, generally speaking, the writer is in accord with those who believe that little good may be accomplished by anything more than free drainage. The latter is to be maintained by the use of a good-sized rubber drainage tube, transfixed by a large safety pin at its point of emergence from the chest, so that the tube may not slip into the cavity. A short silver or glass tube, with a wide flange, may often be conveniently worn.

The procedure just described is often sufficient in the case of children and in early adolescence. In adults, however, resection of a rib is nearly always advisable, as securing better drainage. This operation is done by incising the skin and muscles, parallel to and directly over the rib, for a space of about three inches. The periosteum is incised and pushed away with a periosteal elevator, and about two inches or more of the bone are removed with bone forceps.

Thoracoplasty, or Estlander's operation, consists in the removal of sections of a number of the ribs, with the object of permanently narrowing the chest. It is

done in case the foregoing operations have failed in their object, for the cure of permanent fistulae, for new sacculated empyemas, or when there is evidence that the lung has become distinctly tubercular, or because the empyema is having a very bad effect upon the general health. For further considerations upon this procedure the reader is referred to works on major surgery.

(From *Int. Journal of Surgery.*)

BOOKS

PROGRESSIVE MEDICINE. A QUARTERLY Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D. Volume II. June, 1901. Lea Brothers & Co., Philadelphia and New York. 1901.

The second volume of the 1901 series of "Progressive Medicine" treats of the subjects of surgery of the abdomen, including hernia; gynecology; diseases of the blood; diseases of the glandular and lymphatic system; metabolic diseases; ophthalmology. The contributors to the volume are William B. Coley, M. D.; John G. Clark, M. D.; Alfred Stengel, M. D.; and Edward Jackson, M. D. The book is well illustrated, and is in its usual handsome shape as respects the publisher's part.

INTERNATIONAL CLINICS; A QUARTERLY of Clinical Lectures and Especially Prepared Articles on Medicine, Surgery, etc. Edited by Henry W. Cattell, M. D. Philadelphia. Volume II. Eleventh Series, 1901. Philadelphia: J. B. Lippincott Company. 1901. (Cloth, \$2 per volume.)

In this volume of *International Clinics* the editor has surpassed all previous efforts. The practical subjects considered cover a wide range. There are suggestive lectures by Moses Allen Starr and by Fournier, of Paris, on locomotor ataxia; by Carstairs Douglas on hemoptysis and other hemorrhages; by Hektoen on actinomycosis of the respiratory tract, as well as other topics by other authorities which will be of great interest to the studious physician.

Atheroma of arteries does not contraindicate amputations so much on account of the danger of hemorrhage as because, in these cases, the flaps slough easily owing to lowered vitality. Hence it is necessary to select the operation that will give the best blood-supply.

A New Hospital.

The Detroit Homeopathic Medical College is to have a new college building, and also an emergency hospital in connection with it. The sum of \$33,000 has been paid for the building, which is convenient in location to the business center of the city. Will Detroit please send to Chicago, in our care, one of her new patent pocket-book openers?

NEW YORK STATE HOMOEOPATHIC MEDICAL SOCIETY.

The semi-annual meeting of the New York State Society will be held in Buffalo. It will begin promptly at 10 o'clock a. m., on Tuesday, September 24th. Three half day sessions will be held, namely, Tuesday, 10 a. m. to 1 p. m.; Wednesday, 9 a. m. to 1 p. m., and Thursday, 9 a. m. to 1 p. m. The headquarters will be at Statler's Hotel, Elmwood avenue, adjoining the Exposition grounds, thirty minutes' ride from depots.

The object of holding three half-day sessions is, first, that we may transact all necessary business, and, second, that all in attendance may have ample opportunity of visiting the Exposition, both afternoon and evening. The proximity of hotel to grounds avoids loss of time and tiresome travel to pass from the hotel to the grounds after adjournment. The physicians of Western New York have arranged a program of entertainment for the members and their friends, which will take place Wednesday afternoon, on the Exposition grounds.

Please make a special effort to secure one new member. Very truly yours,

DeWitt G. Wilcox, Secretary.

Dr. Frank R. Day (C. H. M. C., '82) has sold his practice in Honolulu, and is now on a trip around the world.

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American Association of Official Surgeons.

The American Association of Official Surgeons will hold its next annual meeting in Chicago, September 18th and 19th, 1901. No live man can now afford to ignore official surgery or be absent from this meeting.

W. E. Bloyer, M. D., Pres.,
Cincinnati, Ohio.

Henry C. Aldrich, M. D., Secy.,
Minneapolis, Minn.

The fifteenth annual class for instructions in Official Surgery will be held in Chicago during the week beginning September 16, 1901, and will consist of a four hours daily session. For particulars address

E. H. Pratt, M. D.,
100 State St., Chicago.

A young physician, graduate of a first-class homeopathic medical college (1901), wishes to associate himself with an old established practitioner who is in need of an assistant. The applicant is well connected, and fully capable. The editor of the Era is glad to vouch for him. For the first six months he will ask no compensation. Address this office.



That a fire-engine is a water pitcher.

That there is more than one kind of luck.

That straw hats show which way the wind blows.

That the best place for your trousers to bag is at the pockets.

That any man who can always collect his wits is a good collector.

That the greatest misfortune is not to be able to bear misfortunes.

That electricity is dangerous, and yet some people make light of it.

That the man who is looking for trouble never has to go far to find it.

That you may sometimes recover lost wealth, but lost time is gone forever.

That if a woman finds a man who is her ideal she should never marry him.

That a man who is a skillful liar is the very one who is most needed to tell the truth.

That it is a good thing to get into the habit of saying your prayers at night before getting into a folding bed.

That it isn't worth the trouble to meet trouble half way.

That a typewriter always gets rattled when a pretty girl is working it.

That all men are born equal, but some of them manage to rise above it.

That a bookkeeper may not be born to rule, but he does so just the same.

That criticism should not exasperate—it should either benefit or amuse.

That women never miss a good bargain except when they get a husband.

That money talks, and that is why a woman's head is put on every silver dollar.

That a man wants everything he can get, and a woman wants everything she can't get.

That it is not worth while to express your opinions when you can just as well send them by mail.

That there wouldn't be half so much trouble in the world if it were not for the women, and the other half would disappear if it were not for the men.

MEDICAL ERA

CH. GATCHELL, M. D., EDITOR

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VITAL STATISTICS OF THE UNITED STATES CENSUS.

The facts revealed by the mortality statistics of the latest United States census are highly important, and of special interest to the members of the medical profession.

The most significant fact of all is that the average length of human life has been markedly increased in the past decade. What this increase has been is revealed in the following figures:

Average age at death in 1900. 35.2 yrs.
Average age at death in 1890. 31.1 yrs.

Difference 4.1 yrs.

Thus we have presented to us the astounding fact that, on an average, the people of to-day live four and one-tenth years longer than did those of only one decade ago. This adds immensely to the sum of human life, and is a potent factor in the physical and intellectual life of our race, adding much to its wealth-producing capacity, to its ability to command the comforts of life, and thus to the sum of human happiness.

The means by which this great change has been brought about will appeal at once to the intelligent physician. In the main it marks the advances in sanitary science and hygiene, and the refinements in the art of surgery. New discoveries in internal medicine, if we except the use of antitoxin in diphtheria, have contributed but a small part to this total sum.

Of the special diseased conditions the mortality rate of which has been markedly reduced in the period named, pulmonary tuberculosis is most notable. In the ten-year period deaths from phthisis have decreased by the number of 54.9 per hundred

thousand. While this is highly gratifying, yet it is not surprising, for in the past decade greater attention has been given to the study of tuberculosis, its nature, its prevention and its cure, than to any other one diseased condition. That another ten years will show gain equally as satisfactory, we may readily believe. The destruction of the sputum of the consumptive, the forced feeding, and the open-air treatment—all of which in the management of these cases have been more rigidly enforced than ever before—are having their effect in limiting and in curing this disease.

Another class of diseases which have by reduced morbidity and mortality lent themselves to the lowering of the general death rate, are the intestinal affections of children. A better understanding of the dietetics of infancy and childhood and of the element of toxic influences in these diseases, has enabled the profession to deal with them more intelligently and more successfully.

But, after all other causes of death have been considered, it is remarkable what a large proportion belong to the diseases of the respiratory and circulatory systems, as revealed in the following table, showing the deaths from the fifteen principal diseases, with the rate per one hundred thousand:

Pneumonia,	191.9;	Bronchitis,	48.3;
Phthisis,	190.5;	Cholera infant.,	47.8;
Heart disease,	134.0;	Debility,	45.5;
Intestinal,	85.1;	Brain,	41.8;
Kidney,	83.7;	Diphtheria,	34.4;
Apoplexy,	66.6;	Typhoid,	33.8;
Cancer,	60.0;	Abortion,	35.7;
Old age,	54.0;		

Thus it is seen that of these fifteen classes, those belonging to the diseases of the heart and lungs comprise 564.7 deaths in a total of 1183.1.

ORIGINAL ARTICLES

MITRAL STENOSIS—UREMIC POISONING.

BY A. F. THOMAS, M. D.

CHICAGO.

ASSOCIATE PROFESSOR OF THEORY AND PRACTICE OF MEDICINE AND CLINICAL MEDICINE IN THE CHICAGO HOMOEOPATHIC MEDICAL COLLEGE.

(Sub-clinic in Cook County Hospital, stenographically reported.)

This case we present to show the result of treatment with dessicated adrenal gland as a heart remedy.

PATIENT. James M., aged 25. Occupation, common laborer. Single.

PRESENT ILLNESS. The patient states that he has had heart-trouble for a year and a half, being very short of breath on exertion. He has had considerable pain in his chest. One day previous to his admission he had a severe chill, followed by fever. He became unconscious suddenly, and was brought to the hospital.

PAST HISTORY. Does not use tobacco or alcohol.

FAMILY HISTORY. Negative.

Examination reveals a fairly well nourished young man; normal in every respect except the heart.

EXAMINATION. The apex beat is in the seventh interspace, 1 inch to the left of the mammillary line. Upon palpation the beat is soft, and is not well pronounced. There is a slight epigastric pulsation; no fremitus or thrill. Dr. Farnsworth informs me that at a former examination a marked thrill was observed. Absolute dullness extends from the center of the sternum to the apex, which is $4\frac{3}{4}$ inches from the center of the sternum. The relative dullness to the right extends $2\frac{1}{4}$ inches to the right of the center of the sternum, or $1\frac{1}{2}$ inches to the right of the right sternal margin. The upper line of absolute dullness extends along the rib to the para-sternal line and then dips down to the fifth rib at the mammillary line. On auscultation, the aortic valves close with normal sound. The pulmonary second

sound is markedly accentuated. There is no adventitious sound over the tricuspid area. At the apex we hear an adventitious sound, pre-systolic in rhythm, rough and blowing in character, extending up to and ending abruptly with the first sound of the heart. This murmur is not transmitted in any direction, but is heard between the apex beat and the sternum. The pulse is regular, small, well sustained and apparently of high tension.

The diagnosis is one of mitral stenosis. It is based on the character of the murmur, the nature of the pulse, and the unusual dilatation of the right ventricle and the left auricle. There is apparently but very little enlargement of the left ventricle, but the location of the apex beat so far to the left and outward with an increased area of dullness to the right of the sternum, show the marked change in the left auricle and the right ventricle.

In addition to this there is a very marked accentuation of the pulmonary sound; which completes the diagnosis.

In regard to treatment—according to the record, as he has been in the hospital some time previous to my service, he has been given the usual heart-stimulants with apparently little result.

The treatment has mainly been—rest. About two weeks ago I ordered desiccated adrenal gland, 3 grains at a dose three times a day. During his stay in the hospital his pulse has ranged from about 72 to 100. While taking adrenal desiccated gland, his pulse dropped from the average given to from 48 to 80. Its character changed. It was not so tense. It was more regular, and the patient showed marked relief, so that he felt much better. Our supply of adrenal gland being exhausted, he was put back upon the old treatment and relapsed into the old condition. Adrenal gland was again prescribed and he has had it now six days, and his pulse is running normally, except that slight exertion increases it materially.

Result of blood examination. 4,800,000 reds cubic centimetres. White corpuscles, 4800. Hemoglobin, 82 per cent.

Urine analysis shows normal condition of the kidneys.

Patient improved steadily and was discharged from the hospital. He got into a fight, was kicked in the stomach and returned to the hospital in dying condition, living only an hour or so after the second admission.

In private and hospital practice I have used dessicated adrenal gland in fifteen cases with very marked results in three of them. I shall continue to prescribe it where the usual remedies fail, and report the results obtained at a future clinic.

The next is a report of a case treated by Dr. Farnsworth, and is given to show the results of treatment for acute uremia.

Mrs. F., age 54. American.

The patient was picked up on the street by police in an unconscious condition. Admitted to the hospital by the examining physician as a case of coma from heat.

Examination revealed a rather old woman; skin dry and cool. Breathing normal. Pupils somewhat dilated, but reacted to light. Temperature per axilla 95 degrees. Pulse 100; full—bounding—high tension. No edema of face or extremities; some reddish areas of probably dermatitis on the legs. A catheterized specimen of urine showed abundant albumin and large granular and epithelial casts.

Past history, obtained later; was negative with the exception of swelling of the feet after walking.

Treatment: Colonic flushing; alcohol sweat for fifty minutes; 1-10 grain Pilocarpine hypodermically; 1-15 grain Elaterin per mouth; Potassium bicarbonate 2 oz. and Potassium acetate 20 grains, every four hours. Strychnia, gr. 1-60 every four hours.

In the two hours the patient was conscious enough to give her name. Pulse 120, regular, soft; temperature 100. Four hours after this the patient was fully conscious; pulse 118—soft and regular; 12 hours later, pulse 80; temperature 98.5.

The patient feeling good. Recovery uneventful.

URINARY ANALYSIS.

BY GEORGE F. ADAMS, M. D.

GOWANDA, N. Y.

UREA.—To one drop of urine add one drop Nitric acid; evaporate over lamp. Uric acid crystals show under the microscope — 450 to 500 grs. urea excreted in 24 hours. Increased in acute fevers. Doremus' ureometer — Caustic soda and water, 20 parts; Bromine, 1 part. Fill the instrument and add with pipette 1 c.c. of urine.

PHOSPHATES. — Earthy; — Add few drops of Ammonia; shake well and boil; phosphates thrown down in a cloud.

ALKALINE PHOSPHATES. — Filter the above; add one-third volume of Magnesium fluid. Phosphates are increased in epileptic attacks. Phosphates are diminished in most exhausting diseases.

CHLORIDES. — Acidulate urine to prevent precipitation of phosphates, and add a few drops of silver nitrate (1 to 8) Ag. N. 03.

Chlorides are diminished in wasting and febrile diseases.

SULPHATES. — Acidulated Barium chloride solution; 2 parts urine; 1 part barium chloride. Sulphates are increased in febrile diseases. Diminished in chronic diseases of the kidneys.

ALBUMEN. — Boil the upper portion of urine in a test-tube, then add 6 drops of acetic acid and boil again. (Serum-albumen and mucin or mucus may appear.)

NITRIC-ACID TEST. — Fill the test tube one-third full of Nitric acid and add as much urine, allowing it to trickle down the side of the tube. A white ring, if albumen be present, will form at the junction of the acid and urine.

FERROCYANIC TEST. — Solution of Potassium ferrocyanide (10 grms.) and distilled water (200 c.c.). In a clean test-tube pour 15 to 30 drops acetic acid (30 per cent) and add two or three times that amount of the P. F. (10 per cent) solution, and shake. This mixture should remain clear. Now, add clear filtered urine, and, if albumen be present, it will

be precipitated through the whole volume of liquid as a flocculent cloud.

TANRET'S REAGENT. — Potassium iodide, 3.32 grms.; Mercuric chloride, 1.35 grms.; Acetic acid, 20 c.c. distilled water, q. s. ad 100 c.c. Used by contact.

MILLARD'S REAGENT. — Ninety-five per cent Carbolic acid, 2 drs.; Glacial acetic acid, 7 drs.; liquor potassae, 22 drs. Used by contact.

SUGAR — HAINES' TEST. — Cupric sulphate, 30 grs.; Aqua dist., $\frac{1}{2}$ oz.; Glycerine, $\frac{1}{2}$ oz.; Mix. Add Liquor potass., 5 oz. To use: One drachm solution and add a drop of urine; boil and continue to add urine drop by drop, boiling each time. If sugar is present, the liquid becomes turbid and changes color to a reddish-yellow or reddish-brown.

FEHLING'S TEST. — For Sugar: (1) Cupric Sulphate, 69 $\frac{1}{4}$ grms. Aqua dist., 1 liter. (2) Liquor potass., 100 grms.; Aqua dist., 500 c.c.; heat to boiling and add Rochelle salt, 350 grms. Add water to make one liter. Keep each in a separate bottle, and mark blue and white solution.

TO USE. — Mix in test-tube, equal parts of the two solutions — (white and blue) — boil. If no change occurs, add a few drops of urine and boil again. If sugar is present, a yellowish-red precipitate is thrown down.

GOWANDA STATE HOMOEOPATHIC HOSPITAL.

Morphine Habit.

The physiologic cure of the morphia habit consists in brief in the withdrawal of the morphin as fast as possible, but as slowly as may be necessary to effect a cure without distress; in a change from the more stimulating hypodermic to the sedative rectal injections; in the use of heart tonics, especially spartein and digitalis, to combat the craving for morphin in so far as it is due to heart sluggishness; in the use of sodium bicarbonate to combat the hyperacidity of the gastric juice and of the tissues generally, to which in part the craving is due, and in the use of hot-air baths. He warns especially against the use of synthetic derivatives of morphin, such as dionin and heroin. A number of illustrative cases are cited.

A CASE OF SCIATICA.

The case described in the following history was presented for diagnosis at the meeting of the Society for Clinical Research of the Cook County Hospital. The case had some obscure features about it, but after thorough examination and discussion the diagnosis of sciatica was decided upon by all the members present.

The patient—Adolph Huber—aged 26; native of Austria; occupation, carpenter.

PRESENT ILLNESS. The patient states that for three weeks previous to admittance he had severe pains in both legs and in the lumbar region. He has pain in the calves of the leg when at stool. He is constipated most of the time.

PAST HISTORY. The usual diseases of childhood. Three years ago he hurt his left foot; at this time his second toe became much swollen and was amputated. The second metatarsal was scraped and a sinus was present for three or four months. One year ago he began having pain in limbs when walking any great distance. He denies venereal history and does not connect any traumatism with present illness.

HABITS. Smokes cigarettes freely. Drinks beer occasionally.

FAMILY HISTORY. Father and mother are living and are in good health. Four brothers and three sisters are living and well.

The pains complained of are not constant; they come and go quickly, and are referred to as stabbing pains. They seem to follow the course of the Sciatic and Popliteals; they are occasionally referred to the heel.

PHYSICAL EXAMINATION. Reveals a rather poorly developed young man. Skin warm and dry. Tongue coated white. Eyes negative. Chest—Barrel-shaped. Expansion only fair. The supra and infra clavicular spaces markedly depressed. Percussion.—Over apices elicits a slight diminution of resonance bordering on dullness—particularly over the right apex. Auscultation.—Harshness of respiratory murmur. Expiratory sound prolonged. Subcrepitant and so-

norous rales heard posteriorly more or less diffused over both lungs. Subcrepitant rales is more pronounced over the apices. The breathing approaches the bronchial type over an area near the inferior angle of the right scapula.

EXTREMITIES. There is an apparent shortening of the left leg one and one-half c.m. There is a marked tilting of the pelvis. There is considerable limitation of the normal movements of the lower spinal region. There is no apparent limitation of the enarthrodic joints. When lying prone he is unable to place popliteal space to table without arching his back. He is unable to bend and pick objects from the floor. The gluteal fold is partially obliterated on the left side. Several points of tenderness are noted, over both tuber ischii, the sacral region and when deep pressure is produced, bring tuber ischii and femoral trochanters. Lordosis is present when patient attempts to stand straight. Scoliosis is also present. Sensation to touch and pain are apparently normal. Reflexes; Tendon present.

URINALYSIS. Straw-colored, clear; acid—1024; no albumen; no sugar; no phosphates. Diazo reaction negative.

Temperature range—91 to 99 degrees.

Pulse range—56 to 78.

April 28, '01. Fly blister produced, serum withdrawn and injected. Temperature taken every two hours after injection — 98.0 — 98.0 — 99.2 — 99.2 — 98.6. Pulse—72—72—68—68—60.

Syphilis Without Primary Lesion.

Both were caused by punctures from a needle used on a patient with an unsuspected chancre nine days before the appearance of secondary lesions, showing that the blood is infective. The inoculation took place into the blood and skipped the stages which give time for a primary lesion to develop at the point of inoculation, thus impregnating the lymphatic system. The glands became perceptible only with the mucous manifestations. This mode of infection, theoretically studied, has never received as conclusive confirmation before.

THE OVIDUCT.

II. PHYSIOLOGY.

BY BYRON ROBINSON, B. S., M. D.

CHICAGO.

Intra-Abdominal Pressure.

Intra-abdominal pressure aids in ova transportation. This pressure assists in forcing the fluid adjacent to the perisalpinx due to congestion, toward the infundibulum, and the whipping cilia of the fimbriae starts the current distalward in the oviduct. In menstruation, from congestion, the infundibulum is edematous, its fimbriae widely expanded presenting more mucous surface to the peritoneal cavity allowing more chance of securing a floating ovum. It appears that the intra-abdominal pressure does not force fluids through the abdominal ostium of the normal oviduct, but it would aid in forcing the ovum toward the expanded mucal fimbriae whence the ovum would be caught by the stream produced by the cilia. The chief aid of ova transportation in intra-abdominal pressure is by means of peritoneal fluids which have accumulated in the genital region, the distal end of the abdomen. It works through a fluid medium which aids to float the ovum to the surface of the fimbriae whence further progress is accomplished by ciliary motion inducing a fluid current.

Enlargement of Ovary.

In menstruation, the ovary enlarges from the genital congestion of the utero-ovarian vascular circle, and also if an ovum be matured for rupture the ovary will be still further enlarged. All enlargements of the ovary aids to shorten the distance between it and the infundibulum surface.

Secretion of the Adjacent Serosa.

It aids in transporting the ovum by floating it to the region of the infundibulum surface where a stream is set in motion by the cilia toward the oviducal ostium. Congestion of the utero-ovarian vascular circle induces not only secretion of the mucosa (endosalpinx) but adjacent serosa, as in the perisalpinx, ligamentum latum, the germinal epithelia covering the ovary and increased by the fluid from the ruptured ovum—all increasing the

fluid secretions at the peritoneal end of the oviduct enabling the cilia of the expanding fimbriae to create a stream toward the oviducal ostium.

The Funnel Shape.

The funnel shape of the oviduct aids in ova transportation. The large end of the cone is placed not only higher in position but also with its wider end toward the ovary enhancing its chances to secure an ovum. The funnel shape aids the ova transportation by its fluid always remaining at the distal end of the cone, requiring

Receptaculum Seminis.

The oviduct is a temporary or permanent depot of conception. Almost all investigators have studied the oviduct in reference to its reproduction capacity. Since the three coats of the uterus (endometrium, myometrium, and perimetrium) are quite similar to the three coats of the oviduct (endosalpinx, myosalpinx, and perisalpinx) it is not strange that conception, gestation and expulsion should occur in the oviduct, as it is simply a different segment of Muller's duct.

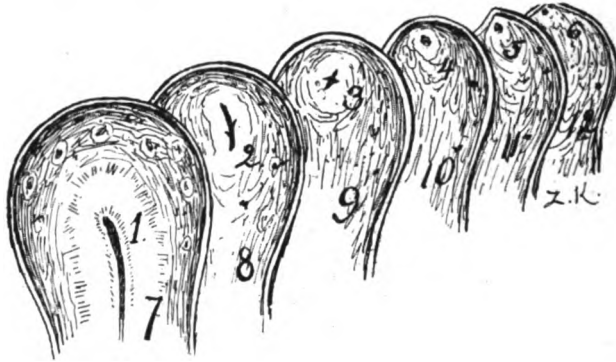


Fig. 10.—(Byron Robinson.)

Fig. 10.—Illustrates the orificium uterinum of the oviduct and the intramural segment by making serial sections of the uterine horn. 1. Median section. 2, 3, 4, 5 and 6. Shows

the location and shape of the orifice through the uterine horn. At 6 the orifice is point formed. 7, 8, 9, 10, 11 and 12. Myometrium. This cut was drawn by making sections of the uterine horn with a short knife.

the least amount of fluid to float the ovum and holding it always in fluid, so that both cilia and peristalsis may act in a maximum degree in hastening its progress to the uterus.

Force of Gravity.

This naturally plays a limited role.

The Oviduct Has an Import and Export Service.

The oviduct has an import and an export service physiologically directly opposed to each other. Ova are exported from the ovary to the uterus through the oviduct. Spermatozoa are imported through the vagina, through the uterus to the ampulla of the oviduct. The cilia whip distalward from the abdominal ostium to the external uterine os and thus drive a fluid stream and float ova in the same direction. Oviducal peristalsis is also directed distally.

Concerning the length of time it requires to transport an ovum through the oviduct there exists a series of systematic experiments in animals which are recognized data. Bischoff found that the ovum of a rabbit required 3 days, the cud chewer 4 to 5 days, and that of the dog 8 to 10 days to pass through the oviduct. Hensen proved that the ovum of a rabbit reached the uterus in 70 hours. Hyrtl is the only author at command who observed distinctly an unfructified ovum in man's oviduct. In this case the ovum reached the uterine end of the oviduct on the fifth day after the beginning of menstruation. However, since the ovarian follicle may burst in the premenstrual, intra-menstrual, post-menstrual or inter-menstrual period no certain number of days can be fixed (for this case) for oviducal transportation. From observation of many investigators it requires about a

week for an ovum to pass through the oviduct of man. Letheby reports that he saw the unfructified ovum in the oviduct in two cases of man, but since no certain details accompany the report it is useless.

saw the spermatozoa fifteen minutes after copulation in the middle of the rabbit's oviduct. In a dog Bischoff saw spermatozoa on the ovary twenty hours after copulation, and again in a rabbit ten hours after copulation it was on the ovary.

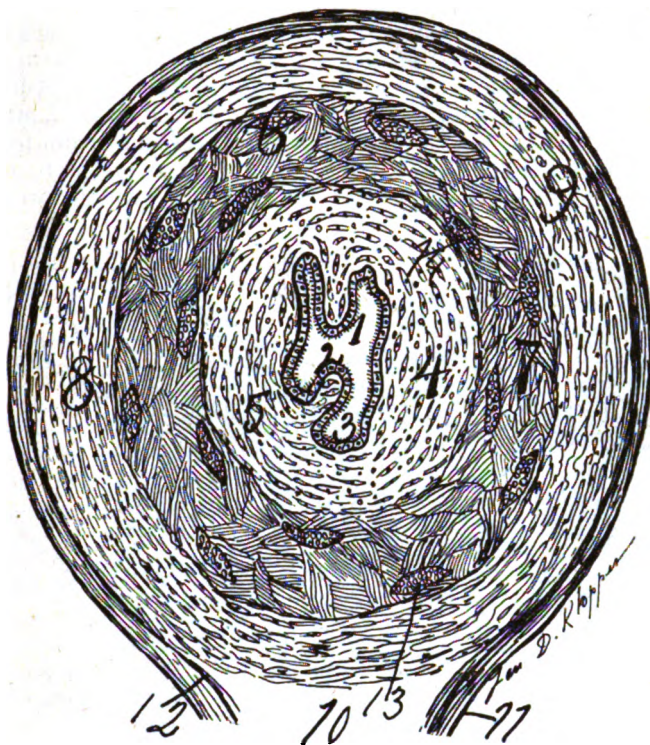


Fig. 11.—(Byron Robinson.)

Section of Human Oviduct at Its Distal End in the Isthmus, Showing the Four Tunics.

1, 2 and 3. Shows the lumen of the oviduct lined by the ciliated column or epithella. Observe the endosalpinx presents two folds only. 4 and 5. Endosalpinx. 6 and 7. Cir-

cular myosalpinx. 13. Indicates a double layer of longitudinal myosalpinx. 8 and 9. Fibro-salpinx. 10. Is the point where the peritoneum is reflected on the oviduct. 11 and 12. Perisalpinx. Note the tunics are thicker than those of the ampulla.

It is important that the fructified ovum arrive at the uterine end before it is too large to pass the narrow point-formed lumen of the intra-mural portion, perhaps less than seven days.

The Progress of the Spermatozoa Through the Oviduct.

The progress of the spermatozoa through the oviduct is rapid, as Hensen found the spermatozoa, two and three-quarter hours after copulation, on the ovary of a rabbit. Bischoff and Luckart

Birch-Hirschfeld made an autopsy in a woman fourteen to sixteen hours after copulation and found living spermatozoa in the oviduct. But this does not prove that the spermatozoa might not have come from some previous copulation. Dührssen found, in a patient who declared that copulation occurred three and one-half weeks previously, living spermatozoa in a slightly diseased oviduct. This testimony from the patient must be taken cum grano salis, as sexual histories are

notoriously false. Albin records that hens have fructified eggs eighteen days, while Harvey and Buffon report twenty-one days after the cock is removed. Dzierzou, V. Siebald and Leuckart report that the spermatozoa remain fruitful for three years in the king bee. In mammals Henle, called the proximal third of the oviduct, the ampulla, the receptaculum seminis, and ascribed to its luxuriant mucal folds the capacity to preserve the spermatozoa for an indefinite period.

Two factors are noted to secure the passage of the spermatozoa through the

oviduct, viz.: (a), the peculiar movements of the spermatozoa, and (b), the (anti) peristalsis of the oviduct.

The spermatozoa possess a vigorous independent forward wriggling motion, and so far as the author is able to understand it is the chief course of their progress. I can see little aid to the progress of the spermatozoa in the muscular walls of the oviduct. According to Kramer, Henle, Hensen and Lotts, the spermatozoa travel from 1mm to 6mm per minute, i. e., from 1-1000 to 1-166 of an inch per minute. Ample proof of the rapid

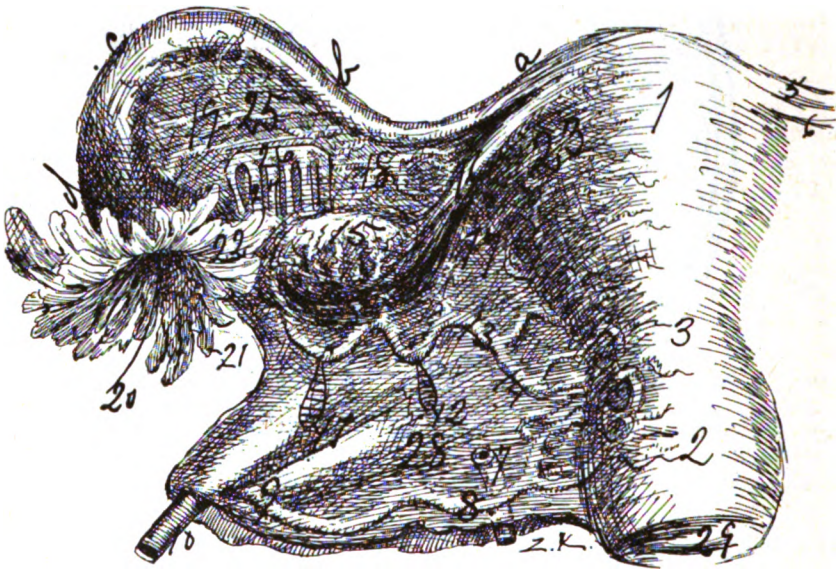


Fig. 12.—(Byron Robinson.)

Posterior View of the Internal Genitals, with the Left Ligamentum Latum Intact.

The artery of the proximal part of the uterus and mesosalpinx is dimly represented in outline shimmering through the posterior blade of the broad ligament. The real artery is drawn distalward by hooks.

1. Fundus. 2. Cervix. 3. Os internum (neck). 5. Right oviduct. 6. Right round ligament. 7. Ureter. 8. Uterine artery (the crossing of ureter and uterine artery, the most important topographical landmark in the pelvis). 9. Uterine artery shimmering through the posterior blade of the broad ligament. 10. Round ligament. 11 and 12. Hooks forcing the ovarian artery distalward. 13. The artery drawn from its position, which

is represented by 17, 18 and 19. 15. Ovary. 16. Round ligament. 20. Bristle placed in abdominal orifice of oviduct. 21. Fimbriae of pavilion. 22. Fimbria ovarica. 23. Shows the old bed of the uterine artery along the uterine border. 25. Mesosalpinx (bounded by oviduct, fimbria ovarica, ovary and ovarian ligament). 26. Gartner's duct. 27. Vertical tubules of the paroovarium (mesonephros) 28. Mesometrium. 29. Os uteri externum.

This figure is drawn from author's specimen secured by operation.

The natural position of the oviduct in each segment is represented, as A to B is the horizontal segment. B to C is the ascending segment. C to D is the descending segment.

The spiral segment of the utero-ovarian vascular circle is well shown in this cut.

progress of the spermatozoa through the oviduct is demonstrated by observation of their movements under the microscope, and also the occurrence of pregnancy when the semen is not immediately washed from the vagina after copulation. The spermatozoa and ova move in directly opposite direction through the oviduct. This fact calls up the knowledge that the meeting of male and female elements, the impregnation, occurs in the oviduct and the actual observation of mammals confirms this fact. It appears that impregnation occurs in the ampulla of the oviduct or in the receptaculum seminis. It appears that the luxuriant endosalpinx folds of the ampulla is a factor in impregnation, but exactly what role it plays is uncertain. As Wendler notes the fructification of rabbits is well known. The spermatozoa begin to attack the ovum thirteen hours after copulation in the ampulla or proximal third of the oviduct. Numerous spermatozoa penetrate the zone of the ovum, and its interior completing the impregnation in some fifteen hours after copulation. (Hensen & Weil.) The segmentation of the ovum begins immediately, and it slowly wanders distally through the oviduct to the uterus (3 days; Bischoff). Sabbatta reports that only one spermatozoon penetrates the ovum of the mouse (contrary to the facts observed in other animals). This is doubtful, for the millions of spermatozoa discharged it is strange that a single one should penetrate the oviduct. In short, it is probable that impregnation of man is similar to that of the lower mammals, and that it occurs in the ampulla of the oviduct (not in the uterus). Some think that the alkaline secretion (Hennig, Bardl) of the oviduct produced from the protoplasm of the cells of the endosalpinx especially nourishes (Frommel) the ovum as it is being transported through the oviduct. It is more probable that the oviducal secretion enables it to float into the uterus, and the spermatozoa to swim proximally through the oviduct, it is a water-way with import and export service. A fluid medium offers the best means for transportation of both elements; a dry medium

could offer poor transportation facilities.

The oviduct is the normal seat of impregnation in man. The proximal third of the oviduct strips the ovum of its adventitious growth and cells, so as to prepare it to be acted on by the spermatozoa.

In the middle of the oviduct the ovum shows evidence of impregnation, cleavage of the yolk begins.

In the distal third of the oviduct segmentation of the yolk becomes advanced.

In direct opposition to the moving oviducal cilia, fluid stream, and peristalsis the spermatozoa ascend the oviduct and progress proximally to the ampulla, the copulation depot, where the identity of the ovum and spermatozoa is lost in a new product, an embryo. The time of maximum import and export reproductive genital service, i. e., during menstrual congestion, is not only important physiologically but is of significant importance to the practical gynecologist, for it is during supreme congestion that transporting blood and lymph channels are highly active and the mischief of disease may be afoot. Doubtless the spermatozoa may live indefinitely in the ampulla, but if they pass the ostium abdominale they would become absorbed by the peritoneum.

In removing the contents of the axilla, began above the location of the vein, and dissect carefully down towards it. Once found it makes everything easier. If the vein is imbedded in malignant deposit apply chromicized gut ligatures at a sufficient distance and remove vein and all. This is better for the patient than leaving behind any cancerous tissue.

In children with prolapse of the rectum it will often be enough to prescribe the daily use of laxatives; to see that the bowels are only moved while the patient is lying down over a bed-pan, and to strap the buttocks tightly together during the intervals between defecations with a wide strap of adhesive plaster.

From the Alkaloid Clinic.

THE SCIENTIFIC SIDE OF DRUNKENNESS AND ITS CURE.

JOHN WHERRELL, M. D.
KANSAS CITY, KANSAS.

(This article is reproduced for the readers of *The Era*, because it is as good a treatise on the subject of the treatment of inebriety as we have seen anywhere, and the method can be successfully followed by any physician.—Editor.)

The drunkard is made, not born. One learns to get drunk the same as he learns to walk — by practice. Both acts are voluntary. Some will learn to become drunkards quicker than others — the same is true of learning to dance, or of any other voluntary act. Very few men will learn to become drunkards with less than two or more years' practice; perhaps an exceptional few will learn in one year.

Anyone who wishes to study drunkenness should do so scientifically. Should you desire to learn botany, you would undoubtedly study plants; if zoology, animals; if geology, the rocks of the earth's surface. If you wish to study drunkenness scientifically, you must study the drunkard. Scientific study means getting at the true facts, not fancies nor sentiment. Every one who makes a scientific study of drunkenness will be astonished at finding how many of the ideas and notions he possesses regarding it are false. It is essential for everyone to investigate for himself. You must not listen to anyone. Banish all ideas you may have of it, and make up your mind to study the drunkard.

To do this, take your note book, sit down beside a chronic continuous drunkard, and record in detail, the history of his drinking from the time he took his first drink until the present. Let him tell his own story first; then cross-examine him; quiz him thoroughly; get the facts, get his actual experience. If you have had experience in case taking not less than one and one-half to two hours will be required to take one history; and then you will probably have to go back for additions, corrections and confirmations. Any one who will take the time to write out the histories of the drinking

experience of twenty drunkards, one-half continuous and the other half periodic, will be apprised of many new facts and of the inaccuracies of medical books on the subject of drunkenness. The larger the number of histories he writes, the more thoroughly will he become convinced that drunkenness is an acquired habit, and that heredity has no part in it.

It may be well to digress just a little for the purpose of informing the reader that the writer is the originator of his own cure for drunkenness. He has had fourteen years' experience in curing drunkards, during which time he has personally cured over three thousand; over seven hundred of the tobacco habit and one hundred of the morphine habit. He has himself taken six hundred and thirty-two histories of the drinking experience of drunkards of every kind and race. The writer's cure and Keeley's were investigated in 1892 by two different commissions appointed by the United States government. Both commissions reported in favor of the writer's; adopted it and used it in the National Military Home, Dayton, Ohio, where over one thousand old veterans were cured. He, the writer, no longer has an institute, advertises none, but treats drunkards as office-patients.

Drunkenness is the name of a psychic state caused by drinking too much alcoholic liquor. It is a symptom, but in no sense a disease. For psychic effect and also for commercial reasons, we call it a disease. The drunkard drinks whisky because he thinks it. Stop him thinking whisky and he will stop drinking it, and not till then. The cure of any drunkard, then, simply consists in getting him to stop thinking drink.

That alcoholic liquor will change one's psychic state, in fact, his whole mental condition, is well known to every drunkard. Many of them will tell you they "took to drink to drown their sorrow, or to smother their troubles." They know by experience that liquor will cause them to cease thinking about sorrow and trouble, and to think about something else, which is liquor; and so long as they think the latter, they cannot think the former.

We must be careful to differentiate between drunkenness and alcoholism. The former is a psychic state, or a psychosis, and is what we cure; the latter a physical state, a generic name for all those diseases whose primary cause is alcoholic liquor. With these diseases we have nothing to do, and we make no attempt to treat them, except occasionally when they antagonize the change of the psychic state of the patient.

The drunkard is practically cured of drunkenness when he stops drinking, but he is not cured of alcoholism. Every drunkard can be cured who wants to be; that is, who has a longing, earnest desire to be cured; and it is utterly impossible to cure one who has not such a desire.

The first essential factor in the cure of any drunkard is to have his consent, and he must be honest in this particular. Such an one is what may be called a normal drunkard, because his cure is sure. If a drunkard is not a normal one, then he must become so, before his treatment will be successful. Should you succeed in stopping him from drinking, you would know he would relapse in a very short time.

We will briefly outline the treatment, which for convenience is divided into five parts: (1) the hypodermic injection or "shot;" (2) the tonic; (3) the diet; (4) the whisky; (5) the "knock-out-shot."

Regarding (1) the hypodermic or shot, two injection solutions are used, which for convenience we will call (1) A and (1) B, the formulas being as follows:

(1) A—

Atropine sulphate gr. $\frac{1}{4}$
Strychnine nitrate gr. 1
Distilled water oz. 1
Cochineal, sufficient to color a rose pink.

Dose, 2 to 20 minims three times a day.

(1) B—

Strychnine nitrate gr. 1
Distilled water oz. 1

Dose, 5 to 15 minims three times a day.

The tonic (2), which we call (C) is as follows:

Fluid extract golden seal (standardized) drams, 2
Ammonium chloride gr. 30
Distilled water, q. s. to oz. 2

Dose, a teaspoonful every two hours while awake.

The diet (3). For the first six days of treatment the diet should consist mostly of Horlick's malted milk. The patient should take two heaping tablespoonfuls of it in half a glass of hot water, "well salted," every two hours while awake. He should take it as a medicine. He may eat anything else, but insist on the malted milk being taken on time.

The whisky (4). The following should be faithfully carried out:

(a) Patient should furnish his own whisky, and carry it with him in a half-pint bottle.

(b) He should drink only as much as is necessary to keep him fairly well braced up—not enough to make him drunk.

(c) He should go into no place where liquor is kept on sale, and should drink no alcoholic liquor except from the bottle he carries with him.

"The knock-out." This consists of a hypodermic tablet of apomorphine, gr. 1-10; dissolved in twenty minims of (1) A. Of this solution inject hypodermically fifteen minims. The object of the "knock-out" is to make the patient sick when he will not of his own volition stop drinking on the fourth day of the treatment.

A few brief suggestions will now be made on the practice and principles of the treatment:

Any physician can treat drunkenness just as successfully as the writer or Keeley, provided he understands the principles involved, which are quite simple.

In the treatment of drunkards the two sides of human nature (a) the psychic and (b) the physical, must be kept in view.

Let a person drink one or two ounces of whisky; in a short time he will experience a change in his psychic state; he will feel exhilarated and in quite a high degree of exaltation, but his physical

state will not be apparently changed. Should he take a few more drinks he would soon feel quite a marked change in his physical state. The first and principal effects of whisky then are psychic, later, psychic and physical.

In the cure of drunkards the treatment is directed to the psychic state of the patient. We have nothing to do with him physically except as certain temporary physical conditions may influence him mentally and these, of course, we try to counteract.

It may seem strange, but nevertheless it is a fact, that when all of the different successful methods for the cure of drunkenness, as the Wherrell, Keeley, the purge method, the bromide method, the various treatments in sanitariums, etc., are all analyzed scientifically and boiled down, the residuum is the same — it is all psychic. And this is also true when the drunkard is cured by means of the pledge, or by prayer, or by religion, or when he cures himself.

Any drunkard, periodic or continuous, who earnestly and honestly desires treatment, is three-fourths cured before he gets his first injection.

The success of the remaining fourth is entirely dependent upon how thoroughly you can impress the patient or make him believe the medicines you use will surely cure him. The injecting solutions are veritable placebos. They are simply the means you use to plant the suggestion of cure. A suggestion can be planted consciously only indirectly; that is, through some medicine; and the injecting solutions are the medium.

Regarding his treatment the patient is in a complex psychic state, composed of three principal elements: (a) He is anxious to be cured. (b) He believes the medicines will cure him. (c) He expects to be cured. As physician you keep these three states active, but play principally on the medicines and make them the medium by which you change the current of thought, or bring about a psychic reaction from thinking whisky to not thinking it.

For commercial and also for psychic reasons every patient is taught that

drunkenness is a disease. Should you tell him it was a habit, he would fail to see there was anything to cure, and consequently you would lose your control over him psychically. You make him believe the injecting medicines neutralize the whisky in him, drive out every drop of it from his system, and above all take away his desire for alcoholic liquor. This accomplished, his faith, hope and expectancy are placed in them; they are sacred in his eyes, a mighty mystery and of wonderful curative power.

In reality it makes no difference what medicines are used provided you can make the patient believe they will cure him. The writer has cured over thirty of the worst drunkards by injecting them with nothing but water colored a rose pink.

If this be true, the reader will reasonably ask, why is there any choice in medicines? Why does the writer use one of the mydriatics (atropine in (1) A) in his injecting solution, and why does Keeley use one (duboisine) in his? We answer, because the mydriatics aid the physician in controlling the patients psychically. As is well known the mydriatics will make the mouth dry and will so dilate the pupils as to necessitate the aid of glasses in reading. This marked physiologic action impresses the patient. The dryness of his mouth lasts from one shot to another and his pupils remain constantly dilated; both of these effects have the virtue or power of keeping the idea of being cured continually before his mind, and so thoroughly is this accomplished that every patient will remind you several times a day, "that the medicine is getting in its work and is having a powerful effect on me." You never fail to take advantage of this, and similar remarks, by reassuring the patient that he is quite susceptible to treatment, and that his cure is as certain as that he lives.

The strychnine in the injection solutions is used for its physiological effect. When the patient stops drinking, the atropine ((1) A) is also stopped, and ((1) B) continued throughout the course. The patient must be injected with some-

thing, and perhaps strychnine is as good, if not better, than anything else. Occasionally strychnine increases the nervousness of the patient, then of course it should be much reduced in dose.

The tonic is used for its psychic and physical effect. The patient is told it will allay what inflammation there is of his stomach, which is a fact, and aid in "cleaning the whisky out" of his system. All drunkards believe that if the whisky was eliminated from their systems, they would have no desire for it. This idea is kept alive by repeatedly assuring them that it is being most effectually done by means of the tonic.

Patients are treated three times a day for psychic effect. It keeps them enthused, keeps the idea of being cured above the floor of consciousness, and gives the physician an opportunity to encourage them and to reinforce the suggestions of cure.

As we have already said, the point first to secure is to get the patient to stop drinking. This he will do in most cases on or before the fourth day of treatment. At his first shot you suggested he would stop the fourth day, and you reinforce this suggestion at every shot until he does stop. A failure to do so at the time suggested, blasts his confidence in the treatment. Should he show but little inclination to stop on the morning of the fourth day, then you tell him you will have to help him out, you will be compelled to shoot him heavier, which will be liable to make him deathly sick. He is retold that the whisky and medicine will not agree much longer, and that the whisky will probably make him sick. At the second shot of the fourth day, have the knock-out prepared beforehand and shoot him with it if he has not stopped. Immediately before or after this shot, induce him to take a drink of whisky. The knock-out makes him very sick. He naturally blames the whisky for it, and will have no more of it; that is, he stops. Should he continue to drink, then repeat the knock-out the next and succeeding shots, until he does stop.

The principle involved in the knock-out shot is an imitation of nature's cure

of a periodic drunkard. There are, as we have already intimated, two kinds of drunkards; the continuous and the periodic. The latter is either drunk or sober. He cannot be temperate. He goes on a spree from one day to thirty or forty, sometimes longer, but he invariably winds up sick, and he does not stop drinking until he does get sick. The continuous drunkard never does get sick from drinking. When the sickness (usually gastric troubles), strikes the periodic drunkard, he struggles heroically to beat it off by continuing to drink, but he finally has to succumb — to stop drinking.

But why does he stop? For two reasons: (1) He believes the whisky is the cause of his sickness. (2) His suffering is so intense that he thinks more about getting well than about drinking whisky. His sickness then changes his current of thought. It changes his psychic state; changes him from thinking drink to not thinking it, or to thinking about getting well.

By the knock-out shot we imitate nature and do practically the same thing by artificial means. We make the drunkard sick with apomorphine or morphine, and endeavor to associate the whisky with the sickness, by making him believe the whisky is the cause of it.

Nature cures the periodic drunkard every time she causes him to stop drinking, and she cures him just as thoroughly as it is possible to do it. No other means or method can be better.

You may ask, how long does nature's cure last? Just as long as the person cured does not think drink, which is true of all cures. The moment anyone who has been cured thinks about alcoholic liquor, thinks a drink will do him good, he is on the road to relapse. Should he nurse these ideas and allow them to intrude themselves upon the floor of his consciousness for even a few hours, he will reason himself into taking a drink, and sooner or later be drunk. To this there is no exception. There is only one way to prevent his relapse; he must change his current of thought by thinking of something else rather than

drink. The permanency of the cure rests entirely with the individual, and it will last only as long as the idea of "not to drink" is kept alive and made principal.

Of those who have been cured by whatever means or method, at least eighty per cent will relapse and the majority of them inside of three years. Any one who relapses once will surely relapse again. You may retreat him, but you will know he will relapse, and the oftener he relapses the shorter time he will remain sober. This is in harmony with nature's cure of the periodic drunkard, whose sprees always get longer and the interims of sobriety get shorter, until he becomes a continuous drunkard.

The diet (3) is a very important element of the treatment. By forcing the malted milk every two hours as directed, the patient will not drink so much; in fact, he cannot do it because the stomach is kept in action. The malted milk is easily digested and acts as a sedative on the patient.

For the insomnia, trional in fifteen grain doses is given. This should be dissolved in hot water and taken just as he retires. Should he not be asleep in twenty minutes, then repeat the dose.

The patient is told that it will take seventy shots to complete his cure. After he stops drinking, it is immaterial whether he takes one, two or three shots a day. Should he take only one shot a day, it would take him much longer to complete the cure.

After he stops drinking he can attend to his business; in fact, it is to the interest of the patient he should do so.

Influence of Altitude in Phthisis.

At the recent congress for the study of tuberculosis Dr. C. T. Williams thus summarized his views on the effect of altitude in phthisis :

"(1) That the respiration of the rarified atmosphere produces hypertrophy of the healthy lung and local pulmonary emphysema around the tuberculous lesions, giving rise in due time to thoracic enlargement;

(2) That it is possible that the arrest

of tuberculosis is at least partly due to the pressure exercised on the tuberculous masses by the increasing bulk of the surrounding lung tissue, which by emptying the blood vessels promotes caseation and cretification of the tubercle;

"(3) That these changes are accompanied by general improvement in digestion and assimilation, the cessation of all symptoms of disease, the return of natural functions, by gain of weight, color, nervous, and muscular activity, and respiratory and circulatory power;

"(4) That arrest of disease takes place in 58 per cent of the tuberculization cases, and great improvement in 87 per cent. That in excavation cases arrest occurs in 21 per cent, and great improvement in 65 per cent;

"(5) That the climate is especially beneficial in hemorrhagic tuberculosis in which hereditary predisposition is strongly marked, and is well suited to chronic tuberculosis of the lungs in general, provided the extent of lung involved is not too large or the disease accompanied by much fever;

"(6) That males and females seem to do equally well and to profit most between the ages of 20 and 30. Males over 40 and females under 20 benefit least;

"(7) That the climate is contraindicated in acute tuberculosis, catarrhal tuberculosis, laryngeal tuberculosis, in cases of tuberculosis accompanied by great nervous irritability, in patients with double cavities, with fibroid tuberculosis, and in all patients whose pulmonary surface has been so much reduced from any cause that it does not suffice for complete respiratory purposes."

It is seldom wise to consent to the parents being present when an operation has to be performed on a child. Children are bound to be terrified when first given an anesthetic, and their cries for help and appeals to their parents are often more than the latter can stand. More than one surgeon has been compelled to defer or even abandon an operation for this reason.

SURGICAL ERA

CHAS. ADAMS, M. D., EDITOR

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ORIGINAL ARTICLES

OPERATIVE TREATMENT OF UTERINE DISPLACEMENT.

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INDIANAPOLIS, INDIANA.

The evolution of the correct treatment of uterine displacements has been prolonged and varied; and no problem in gynecology has called for more thought and experience. It was the first number on the program of the gynecologist, and through all the extensions and acquisitions of knowledge is still under discussion. The first demand upon the skill of the gynecologist was for the relief of the displacements of the womb, or, as it was generally termed, the "falling of the womb." Here was an anomaly so clearly defined that the victim even was able to diagnose it and make effort to correct it. From this early beginning ingenuity and experience have had play and many devices and modes of treatment have had employment, each in its turn serving its time and contributing its part toward the ultimate and finished technique.

The problem throughout has been to assist nature to retain the organ in its correct position; not only to correct the deviation, but to remove the causation thereof so far as to enable the natural forces to play their allotted parts and make unnecessary all further foreign intervention. As before stated, this has turned out to be a very large question, involving almost every branch of the healing art and taxing to the full our knowledge of vital physics. For extended experience has demonstrated that the solution of the various problems presented by the displacements of the uterus may be so complex and difficult as to lay under tribute the sum total of gynecological knowledge and make the gynecologist who achieves the end a veritable "Doctor of Laws."

But however difficult the problem, it is

found that the solution of it is dependent all the time upon the knowledge and use of kindergarten learning. In all problems of whatever character the same requirements obtain—we must never lose sight of primal principles or neglect to use a thousand times over, if need be, the quaint and homely symbols learned in the primaries. And especially is this true in the practice of the healing art and that branch of it in particular now under discussion.

In the definition of "Uterine Displacements" I can not do better than to reiterate what I have said elsewhere.

"Uterine position has wide latitude within normal limits. Situated between organs subject to distension and collapse, the uterus may be pushed forward or backward through a space of several inches as the frequent daily needs require. It may rise or fall to an equal or greater extent, as is shown by sneezing, tenesmus, the genupectoral position and respiration. Its lateral mobility while not so great, is yet marked, and rotary motion is in some degree possible. Having no solid foundation upon which to rest, and being suspended in mid-pelvis by guys and attachments more or less elastic, it may disport itself as a trapeze performer in executing any movement within its physical capabilities. Whether it rise or fall, lie prone or decubitus, traverse with its fundus an antero-posterior arc of sixty degrees, or make obeisance in its flexions to any point of the compass, is of small consequence so long as it shows its ability to regain and maintain itself. The positions assumed may be regarded even as anomalous, but so long as the uterus is able to return spontaneously to its normal position after the transient cause of the deviation has ceased to operate, it can not be charged with displacement."

Uterine displacement can not be diagnosed in the clinical sense therefore until the deviation from the normal has be-

come more or less stable. There must be limitation of automatic movement, prolonged departure from normal position, and inability to maintain that position when regained, to fill the requirement. In displacement passive movement may be in no sense circumscribed, the uterus may remain even abnormally movable, but active and independent exercise is more or less suspended, self adjustment is impeded, and normal ability thwarted.

Uterine displacement then, implies the embarrassment or obstruction of definite normal movement and the suspension in part or whole of normal ability. The play of forces incident to normal exercise has been disturbed and the equipoise lost. Natural prowess no longer obtains, an enervated and toneless organ is encountered, and forces rule that dominate all passive bodies—I mean particularly the force of gravity. Especially is this true of all backward displacements of the uterus, inasmuch as the consideration here must embrace not only the weight of the helpless decubitus uterus, but the superimposed bowels pressing down upon its anterior surface, instead of forward upon its dorsum, as in the normal position.

Uterine displacement may be produced primarily by any cause that induces intensification of intra-abdominal pressure. Lifting a heavy object, violent vomiting, prolonged coughing, a blow on the abdomen or a fall in which the sacrum receives the impact, may serve as the initial. Even an habitually distended bladder may impinge upon the uterus so continuously as to lead to permanent displacement. But while incidents of this character may serve as the direct cause, there is in each instance a predisposing cause or antecedent condition of the system that must be regarded as part of the problem. Incidents capable of serving as the cause direct are of daily occurrence in the life of every woman, but it is only in cases of enfeebled or crippled vitality that they prove effective. When the life forces are regnant, uterine ligaments, like the drawn bow of an archer, spring back the moment the pull is relinquished, thus obliterating all evidences of displacement. It is only in cases of mal-nutrition and en-

feeblement that elasticity is impaired, that power to regain the erect is wanting and that the uterus continues to lie after it has fallen.

It is clear that a comprehensive grasp of the subject can not be gained without considering the antecedent factors potent in the production of this anomaly. Rigid induction has disproven the opinion held for a long time by most gynecologists that the predisposing causes of uterine displacements in the majority of instances were chargeable to puerperal experiences; that inasmuch as most victims of the misfortune are found among those who have borne children the causation was, therefore, due to some mal-performance during the puerperal state. Careful clinical study has shown that while the larger portion of such patients are thus found among post-parturients, the pelvic weakness and liability to displacement, if not the displacement itself, were in evidence before the first pregnancy and the deviation was established or re-established in the puerperium because the uterine attachments were in the beginning relaxed.

This is in accordance with the observation of Kustner, that uterine displacements, or the tendencies thereto, "have been carried over into the sexual life from the time of puberty and puerility;" and proves that errors of development underlie most, if not all, of the cases, and that mal-nutrition is the universal factor. While the argument in no sense belittles the agency and importance of the puerperal factor, it justly emphasizes the necessity of the early and full development of the female sexual organs.

The partial or complete arrest of the development of the uterus and adnexa is present in our day to a most surprising degree. The number of girls who reach the age of twenty with the sexual organs in an infantile or dwarfed state is alarmingly great. Whether this be due in our cramming educational process to the diversion of the nutrient blood-supply from the pelvic organs to a precociously developed brain; to the metastatic influences of zymotic diseases during puberty; or to indiscretions due to ignorance and willful disregard of menstrual demands, I can

not now discuss. I note the fact as a reason for a more rigid censorship over those girls, especially who are contemplating marriage, and over all who in any way manifest sexual embarrassment or inability, or who give evidences of sympathetic disturbances.

Enlightened thought on this subject to-day demands that all girls should be freed from the handicap of sexual non-development before marriage is entered upon, and whenever embarrassed functional evidences are announced; that motherhood should never be essayed by one possessed of organs wholly incapable of completing the act without extra hazard or catastrophe; that uteri and uterine attachments which ceased to grow at the age of thirteen or thereabouts shall not be allowed to attempt the responsibilities which are safely and easily discharged only by those organs of full maturity. To this effect there must be a recast of views upon the subject of early physical examination in all such cases. Invalid and markedly undeveloped girls must undergo the rigid scrutiny demanded in such instances. They must be the recipients of such help as is afforded by the gynecological resources now developed. Their sexual helplessness must be supplanted by that vigor and tone that is the birthright of every one and without which capability and the creditable performance of normal functions is an impossibility.

I have purposely dwelt upon this phase of the subject because I consider it to be the chief factor in the remedy of uterine displacements. I mean (1), that the establishment and possession of such vigorous organic ability would be as effectual bar to the development and continuance of physical incompetency before the occurrence of impregnation; (2), that it would insure freedom from most of the perils of parturition and (3), that no cure of uterine mal-position can be attained without regainment of normal vitality—both local and general. Wisely directed treatment, therefore, must in the first place anticipate the effects of the force of gravity upon a helpless organ by insuring the proper development of that organ; it must hedge against the possibility of uter-

ine or adnexal disability by prophylaxis; it must see to it that every young woman is possessed of her full complement of life-energy, both local and general. I say the work of the gynecologist properly begins before the announcement of uterine instability; and is, ideally of the order of prevention rather than patchwork.

Unfortunately this wise exercise of our knowledge is permitted too rarely. The faulty practice now is to wait till the weakness is engendered; to withhold help till the mal-position has become stable. It is the up-hill work of reform; it is the regainment and re-establishment of energy lost that is, for the most part, called for in these days.

Coming from the abstract to the concrete, let us enter the clinical arena and deal with conditions rather than with theories. Here is a girl under twenty, who is complaining of menstrual irregularities. The menstrual discharge is wanting; it is too scanty or too profuse, or is voided with great pain. She is, perhaps constipated, a poor eater, and has bad digestion. She has neurasthenia and faints away with or without provocation. She may be a consumer of slate pencils, chalk, plaster or other earthy matter, and is more or less incompetent mentally as well as physically. A reasonable course of medication, calisthenics, reform of school duties and residence in health resorts, may have been tried without permanent relief or benefit. Before much time is squandered in fruitless effort of this kind she should be anaesthetized and examination made of her clitoris, vagina, uterus, ovaries and rectum. Clitoral adhesions should be broken up, stenoses of sphincters overcome, papillae of urethra, vagina or rectum removed, as well as every other occasion of sympathetic irritation. The diminutive uterus displaced or not—must have rapid and thorough dilatation; the endometrium must be freed from all traces of vegetation and the uterine muscle must be aroused from its dormancy by the induction of "mock labor"—this should be accomplished by means of uterine packing with aseptic gauze, continued from twelve to thirty-six hours, or until nature shall make protest in a slight rise

of temperature, say, from one to three degrees. The object accomplished by this congestion is to enlarge the uterine vessels, to obtain better blood supply to an anemic part, to get better nutrition in a starved organ. Of course the treatment by divulsion and packing must be dependent upon the absence of acute inflammatory conditions in uterus and adnexa as well as all other contraindications. But her sexual forces must be freed from all thralldom and aroused to energy by methods simulating the normal and natural exercise, and nothing will do it better than such mimic labor. At any rate such an embarrassed girl, should never be allowed to reach conception or be forced to acquire uterine development after a possible impregnation; but invariably should be brought up to her grade before marriage. It is remarkable how responsive nature will be to such effort, particularly through the first half of the child-bearing cycle. Development and growth of the retarded female sexual organs is attainable in most cases at any age under thirty years; and while increase to normal standards at a later period is more problematical or wholly impossible, the removal of all occasion of sympathetic irritability is followed by such physical calm as is compatible with good health.

Whenever uterine displacements have been acquired in the nulliparous state, the foregoing regime is applicable, subject always to such modifications as may be dictated by the morbid conditions present in the given case. Inflammations within and around the uterus should be overcome, resultant adhesions absorbed or loosened up and tubal or ovarian degenerations ruled out before the employment of the radical measures here outlined. It must be remembered that a long decline of vital energy may have preceded your effort at cure; that uterine ligaments may have been under tension in such degree and for such time as to have acquired undue length and wholly to have lost their elastic tone and retaining power and that a long-directed effort may be called for in the establishment of health conditions. To this end there must be persistent employment of the properly selected internal remedy; the uterus must be kept in right

position for a sufficient time by wool tampon or other properly adjusted mechanical support, and every adjuvant utilized that will favor this accomplishment. Even then it may be ascertained that the elastic tone is irreclaimable, that the ligaments and connective tissues are persistently lax and elongated and that ventral-suspension may be necessary.

Whenever uterine displacement has been acquired by the woman after parturition, the requirements of treatment are in many instances identical with those found necessary with the nulliparous, but may have in addition new features. While the development of the puerile uterus has been accomplished in a measure by means of gestation, the parturient act has been inadequately performed and extensions and additional burdens have been imposed upon the state of pre-existent weakness. Cervical laceration, retained placental fragments or endo-metritis may have thwarted the performance of involution; and subinvolution of the uterus and its ligaments may have remained. In addition, the vaginal and perineal supports may have been weakened or destroyed by rupture, thus obliterating all the restraint and sustaining force of the pelvic floor. Under such circumstances the abnormally heavy uterus inadequately tethered by its lax and subinvoluted ligaments, like a top-heavy balloon, falls helpless and enters upon its course of descent. Prolapse is next in order and full procidentia a matter only of time. It is good fortune indeed, if, in all this embarrassment, sepsis has not been superimposed and the ravages of inflammation are not an additional complication; or, if the cell-life in the uterus or ovaries has not been diverted in its embarrassed activity into the evolution of cyst, fibroid or cancer. In any event successful treatment is dependent upon the fullest comprehension of the facts and the probable employment of a wide range of remedial measures. The sole object being to establish or re-establish normal ability all facts acting as a hindrance to this accomplishment must have abatement. Subinvolution, cicatrices, broken vaginal or perineal supports, perimetric or adnexal adhesions and all adnexal diseases or degenerations

must be proven not to exist, or if existent, to have abatement or removal, if stability of normal uterine position is to be maintained.

Coincident with all this and of equal import with it in the etiological process, is the rectal factor. All gynecology must be a failure in greater or less degree that does not comprehend rectal pathology. Uterine morbidity almost without exception is attended by rectal morbidity. They go hand in hand. The ability to exhaust the general life force and make the individual affected a physical bankrupt, is as pronounced in the one case as in the other, and very effective when working together. It is sympathetic nervous irritation in both cases and the phenomena are identical so far as expression and significance are concerned.

From personal observation I am convinced that rectal morbidity is the leader of the procession in point of time; that it may and usually does originate in babyhood or early childhood, and that its enervating effects are operative long before the first impulses to quickened life are perceptible in the female sexual organs. Consequently I do not hesitate to believe that rectal morbidity plays a very large part in the causation of sexual non-development as well as in the production and continuation of neurasthenia so pronounced in every gynecological case. Linked to this in closest bond is the companion nerve waste, due to adhesion of the hood of the clitoris. From infancy onward this prolific source of irritation is in evidence with almost every girl, robbing her of physical equipoise, engendering neurasthenia and dwarfing sexual development. Few if any of us yet realize how important the abatement of this nerve waste is. Let it be writ large: Examine every girl in early childhood and free her effectually from all clitoral adhesion, as well as of all rectal irritation.

After all has been done, however, to rectify displacements of the uterus that the nutritional problem can suggest, many persistent and wholly intractable cases will remain. The normal tone of the uterine muscle and ligaments in such cases may be irreclaimable by any and every kind of procedure. The uterus may

persist in resuming its malposition whenever external support is withdrawn; or may protest with pain and intolerance to the employment of any mechanical device or scaffolding, designed for its support. These are the cases that have tested the resources of gynecology to the utmost limit and have defied successful treatment till times the most recent.

In the foregoing has been included all those plastic operations designed for the repair of the pelvic floor, both in the narrowing of the vagina and in the reproduction of the perineal body,—thus insuring against the prolapse of the bladder and rectal walls as in vesicocele and rectocele; also all those procedures upon the uterus through the vagina designed to improve nutrition and normal status such as division, curettement, intra-uterine packing, repair of torn tissue and removal of cicatrices; and yet further, all simulation of crutch methods, such as wool-tampon or pessary, designed to aid a weak member while strength is being regained.

After all this has been done and the end still unattained, what next? I shall not attempt to give historical account of all that has been attempted by way of further operative treatment to hold up a helpless uterus; of the many methods of suturing through the vault of the vagina, bringing the fundus into anterior flexion upon the cervix, as advocated by Schucking, Mackenrodt and others; of the fixation of the fundus to the anterior vaginal wall, thus producing an anteversion where previously retro-displacement existed; nor of the many supra-pubic endeavors to suspend the uterus with or without abdominal section.

Passing the detail of all these, I deem it sufficient to narrow the discussion to the field of present day experiences and to dwell only upon the methods that still live. First to be disposed of is what is known as Alexander's operation. This consists of a superficial dissection on either side of the median line of the pubes, the exposure of the round ligaments of the uterus, the pulling them taut through the vaginal canal, and fastening them, thus shortening them, and holding the uterus snugly against the anterior pelvic wall. This has not commended itself to

operators as an ideal procedure for several reasons. It has not been an easy matter always to find the round ligaments. Sometimes its external fibers are divided or expanded in such manner as to elude detection, or the ligament is so slender as not to withstand the force of the requisite pull—frequently leading to a break. Again it is appropriate only in those cases free from uterine adhesion and free also from ovarian and tubal degeneration. Since it is known that tubal and ovarian complications are very frequently present in cases of uterine helplessness, even when bimanual examination fails to reveal them, there is no certainty of healthful conditions after the performance of the operation. The greater safety and effectiveness therefore of the operation urged by its early advocates are not points well taken.

The exceptions to its efficiency and the lack of much needed information regarding the exact status of intrapelvic conditions, have forced the Alexander operation into the background and have left its solitary advocates, here and there, to wage its losing battle.

More and more as experience ripens do operators demand to know the exact facts in all these cases of long-lasting malnutrition. Is it an unsuspected, though small, uterine fibroid, an undetected pyosalpinx, or a hopelessly degenerate ovary, that has eluded detection and that still serves as the incubus? Very often no one can tell this without the aid of vision. And for this reason open exploration with direct manual intervention is the ideal procedure.

The objection of greater danger in the technique of abdominal section urged against ventro-suspension by the advocates of the Alexander operation are found to be wholly groundless; while the ability to deal with any phase of the problem presented in a wholly intelligible and effective manner is reason conclusive for its adoption. The technique consists in entering the abdominal cavity by ordinary laparotomy, determining the exact status of the uterine fundus and adnexa, breaking up adhesions if found to exist, doing patchwork of ovaries or tubes, if

available, or removing them if wholly degenerate, or in bringing the fundus of the salvable uterus forward to the ventral wall and retaining it there by at least two strong but absorbable ligatures. If the points of attachment upon fundus and ventral wall be slightly scarified the ligamentary union resulting will be the stronger and before the absorption of the catgut or kangaroo, will have formed an effective support otherwise unattainable. As time passes there will be sufficient elongation of the new ligament to accommodate the uterine demand and abolish all sense of the tension at first experienced in some cases. This is known as ventral suspension in contradistinction to ventral fixation as Schroeder's operation was called. The latter consisted in opening the parietal peritoneum down to the musculature, removing a portion of the peritoneal covering of the fundus and implanting the fundus in the ventral wall, thus making a firm union of the uterus and abdominal wall. This, however, soon revealed its objections and was abandoned.

Ventral suspension therefore is to-day the survivor of the many methods devised to aid an otherwise hopelessly crippled uterus to regain its normal standing and has so much to commend it that it will, in my opinion, remain, henceforth, the classical operation. Through the steps of its procedure definite knowledge can be obtained of the requirements in each case and whether the suspension itself may not be a thing wholly inadequate to the cure. Frequently after entering the abdominal cavity have I been forced to abandon my original purpose of ventral suspension by the discovery of fibroid or cystic conditions inimical to the life of the uterus and adnexa, necessitating their extirpation.

Illustrating the futility of extra-abdominal methods in dealing with some cases of this kind, I desire to give the history of two or three cases and at the same time show by their pathological specimens the reasons for the failure of their previous treatment.

CASE I.—A maiden of thirty had been a complainer for many years from sym-

pathetic disturbances of the stomach, heart and head, due as alleged to retro-flexion of the uterus. It had been found to be impossible through long experience with various doctors to obtain any benefit by way of medicinal treatment or of mechanical support and growing tired of the effort, she had let her case drift; finally, however, she was forced to try again. Upon examination I found that what had been taken for a retro-flexed fundus was in reality a subperitoneal fibroid, now grown to the size of three by four inches and weighing a pound. The abdominal hysterectomy a few days later proved that besides the large fibroid readily diagnosed by the bimanual method, attached to the fundus by a small pedicle, the uterus was growing several smaller fibroids; both ovaries were in cystic degeneration and both tubes sacculated by pus-accumulations; all were removed. Her recovery was uneventful and she left the hospital in three and a half weeks, a well woman.

CASE II.—Also a maiden, thirty-five years old. Had been a bed-ridden invalid for many years—with neurasthenia and all the neuroses, real and imaginary, possible to express. She was a great sufferer from hemorrhoids and retro-flexed uterus. The former she wanted removed by radical operation; the displaced womb she did not propose to bother with further. Assuring her that ventro-suspension would effectually overcome the helplessness of the womb, she consented to the double operation. Electing to do the suspension first, I was convinced upon entering the abdominal cavity by laparotomy that hysterectomy was necessary, as I found the fundus uteri studded with small fibroids and thus a hopeless member. Removing the uterus therefore and later the hemorrhoids, she returned to her home well and happy in four weeks.

CASE III.—A maiden till forty, but married five years, had been troubled with backward displacement of the uterus for many years. She had been treated unavailingly till discouraged and had grown very nervous and depressed; was frightened by the prospect of insanity—and withal, had very troublesome dyspepsia.

She had just spent eight months at a famous sanatorium, undergoing daily lavage of the stomach, but had refused their proposed Alexander operation for the correction of her displacement. She had heavy adipose walls, so that I could not determine the exact condition of the fundus and ovaries, but I succeeded in gaining her consent to ventral suspension. Entering through laparotomy I found the fundus helpless because of small fibroids embedded within the uterine muscle—I did hysterectomy instead of suspension, clearing the rectum also of its morbidity. She made uneventful recovery.

CASE IV.—Mrs. A., age thirty-eight. Married but sterile; had spent twenty years in vain endeavor to overcome uterine displacement and regain health. Medical treatment, tampon treatment, pessary treatment and electricity had been repeated by one doctor after another through all the years, till hope grew sick. When finally she reached my examining table it was not difficult to detect the presence of uterine fibroids and to understand the reason for all the failures of previous treatment. The extirpated uterus, here presented, with a fibroid at the internal os, another in the central portion of the fundus and another in the left cornu pushing the tube and ovary far out from the body is certainly a valuable object lesson. One can readily understand how these growths in their beginning could easily escape detection and prove sufficient cause for sterility and incurable retro-version. Suffice it to say: she made an uneventful recovery after abdominal hysterectomy and now has had five years of healthful and happy existence.

CASE V.—A maiden of forty-six, always healthy and apparently strong, appealed to me for cure of retro-flexion of uterus that had been troublesome for two or three years. I detected a sub-peritoneal fibroid with small pedicle growing from the rear wall of the fundus that filled the Douglas space. Laparotomy revealed the necessity of hysterectomy. The fibroid weighed a half pound, the uterine body was studded with other small fibroids and the tubes, particularly the right, had so far degenerated as to become fused

and incorporated with the major fibroid. Recovery was quick and complete and resultant health without a flaw.

Is it necessary now further to question operative procedure in prolonged cases of uterine displacement?

203 NORTH MERIDIAN STREET.

Delirium Tremens.

In an article on the treatment of delirium tremens, states that in the case of an old alcoholic the liability to the development of delirium tremens is increased by the sudden withdrawal of alcohol, loss of sleep and lack of proper nourishment when on a debauch. Premonitory symptoms are continuous dilation of the pupils for twenty-four hours before the onset, and excessive nervousness. As regards treatment, in severe cases the quantity of alcohol is diminished gradually; in mild cases it is stopped at once. Other drugs, such as ammonia, camphor, and ginger are substituted at frequent intervals. Nourishing food is given. Heart stimulants are administered, and sleep, which is the great restorer, is secured by giving sulfonal, trional and if necessary chloral and potassium bromid, hyoscin hydrobromate, or musk. Morphia frequently fails to quiet a patient. A tactful and patient attendant should exhaust every means of managing a violent patient before forcibly restraining him, but if necessary do it successfully at once.

Alcoholic Cirrhosis.

With regard to alcoholic cirrhosis, drunkard's liver, the history must be the main diagnostic aid. In alcoholic cirrhosis the spleen usually enlarges later than it does in syphilitic cirrhosis. With regard to syphilitic hepatitis it must be remembered that sometimes iodide of potash does no good, because the connective tissue in the liver has become fully formed and no longer yields to the absorbent effect of the iodide.

An absolute diagnosis of small-pox can not be made before the eruptive stage, except in the hemorrhagic form.—Dr. Herman Spalding.

BOOKS

PRACTICE OF MEDICINE; CONTAINING the Homeopathic Treatment of Diseases. By Pierre Jousset, M. D., Physician to Saint Jacques Hospital, Paris, etc. Translated from the Third Revised French Edition, with Valuable Additions and Annotations, by John Arschagouni, M. D., Physician to the New York Homeopathic College and Hospital Dispensary, etc. New York: A. L. Chatterton and Co. 1901.

All the older homeopaths will recall Jousset's "Clinical Lectures," translated in 1879 by the late Dr. R. Ludlam. Here comes another book from the pen of the same distinguished French clinician, containing the results of a subsequent experience of twenty-two years.

The author has given us a complete work on the practice of medicine; and in doing so he expresses the hope that it "Will be a means of propagating and diffusing the medical and therapeutic doctrine to which he has consecrated his life."

The nosography is according to the French system, and is based upon the doctrine of morbid species.

The work is methodically divided into classes and groups. We find classified, Constitutional Diseases; Diatheses; Cachexiae; Fevers—Eruptive Fever; Continued Fever; Intermittent Fever; Pestilential Diseases. The other diseases are similarly classified, and nothing in the whole domain of clinical medicine seems to be omitted.

Jousset's work will be chiefly consulted in order to gain a knowledge of his application of the homeopathic remedy in the treatment of diseases. During the lifetime of the present generation of physicians our distinguished French author has been recognized as one of the leaders of our school. He here gives us the result of his many years of experience, and the student will not be disappointed. In enumerating the remedies for the treatment of diseases, he does not go through the whole alphabet of the *materia medica*, but, giving preference to the medicines most frequently employed, he names each one and follows it by an enumeration of

the indicating symptoms. In each instance the author names the attenuation of the drug. In his practice he is truly liberal; he recommends anything from the tincture to the sixth, twelfth, and even the thirtieth. Nor does he confine himself strictly to methods of treatment involving the minimum dose and the similitum, for he does not hesitate to make use of drugs and measures taken from the realm of "rational" medicine.

It is a good book, and a valuable addition to the literature of homeopathy.

The volume is well printed and durably bound. It contains 1115 pages. Dr. John A. Arschagouni is to be congratulated on the excellence of his translation.

Adrenalin Chloride Solution (1:1000)

It is impossible to make a solution of the Adrenalin by methods ordinarily available. Adrenalin Chloride Solution is always ready for use. It should be administered either in the form of a spray, varying in strength from 1:10,000 to 1:1000, or internally in doses of from 5 to 30 minims. For topical application the solution may be diluted with freshly boiled water or normal salt solution. As a remedy for the relief of Hay Fever, Solution Adrenalin Chloride promises to give a most excellent account of itself. In those cases in which the angioneurotic element is unmistakable, it may be used locally and internally.

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Little children should never be operated on during very hot weather if the surgeon can choose his own time. They are very apt at this time, however carefully they are fed, to develop a severe form of intractable diarrhea.

Never give purgatives to children who have swallowed foreign bodies, for the reason that it is better that these should travel in company with fecal masses than by themselves.

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Residents of Chicago may take some satisfaction in the statistics of the census on discovering that of all the cities of the first rank, this one has the lowest mortality rate. The number of deaths per thousand inhabitants is as follows:

New Orleans,	28.9;	San Francisco,	20.5;
Washington,	22.8;	Cincinnati,	19.1;
Philadelphia,	21.2;	St. Louis,	17.9;
New York,	20.4;	Cleveland,	17.1;
Boston,	20.1;	Chicago,	16.2.

Its moderate climate and its abundant supply of pure water thus makes of Chicago the most healthful large city in the United States.

Cancer occurring in a breast, after the other breast has been removed for this disease, ought to be operated on if there is no sign of recurrence on the operated side, because the new-growth must be considered as a primary lesion rather than as a result of metastasis.

\$3,000.00 practice for sale in large county seat in Central Kansas. Price low. Reasons for sale—wish to practice specialty in larger town. Only homeopath in the city. Address—Care of "Medical Era."



That "luck" means getting up early in the morning.

That it is woman's highest privilege to change her mind.

That nothing so takes the conceit out of an old bachelor as to marry a widow.

That if you would love your friends as hard as you hate your enemies life would be sweeter.

That we know not which to laugh at hardest, a girl who is womanish or a woman who is girlish.

That you should not hate those who oppose you, for to them in great measure you owe your success.

That it is foolish to worry about trifles; the holes that let the water into your shoes will also let it out.

That your friends labor for you and your enemies advertise you; these are the two great elements of success.

That it pays to be honest, but it's slow pay.

That a baby doesn't cut teeth; it's the teeth that cut the baby.

That after all "hammock" is only another name for spoonholder.

That want of care creates more damage than want of knowledge.

That money is the root of all evil, but we all root for it just the same.

That a man is uncomfortable until he goes some place where he can put his feet where he likes.

That the reason we give away so much good advice is because we don't have any use for it ourselves.

That after you have conquered everything else you should set about conquering your prejudices.

That few people appreciate a clear conscience until they get a chance to compare it with a guilty one.

MEDICAL ERA

CH. GATCHELL, M. D., EDITOR

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WILLIAM McKINLEY.

Of rulers, the greatest has fallen. Of men, an immaculate Knight has passed away. The tears of a Nation attest a people's love. The heart-throb of the world tells of mankind's esteem.

Physicians, members of our school, have special cause to remember with affection and gratitude the one whose untimely end we all so deeply mourn.

On a memorable day in June of the closing year of the last Century, William McKinley sat with us at the base of the monument to Hahnemann, to dedicate which we had gathered in our National Capital. Throughout the period of the dedicatory exercises — the greater part of an afternoon — he gave of his time, and followed all with unfaltering attention and with sympathetic interest.

This friendly recognition the President gave to our Institute; this gracious tribute he paid to our Hahnemann, and to the occasion that brought us together.

Few who were not present at Washington are aware of the fact that at the very hour that the President was devoting his time to our dedicatory exercises, the National Convention in Philadelphia was engaged in nominating him for reelection to his high office. It will also be recalled that the evening of that day, so important in the calendar of his own life, he and his gracious lady devoted to receiving the members of the American Institute of Homeopathy.

Because of the facts here stated it can

safely be said that the President's devotion of his time and attention to our affairs must, on his part, have called for more than the usual amount of self-denial.

It is by such acts, so characteristic of this great-hearted man, that he came to be the much-loved President. And it is because of his act of this day in June, a year past, that we say that all members of our school have not only the universal inspiration to love and revere him, but we have, as well, a special cause to hold in grateful memory William McKinley, this man of God whose gentle nature and kindly spirit endeared him to all mankind.

KOCH'S NEW DOCTRINE.

Since there is to be so much discussion in the near future concerning the radical proposition stated by Dr. Koch at the recent Congress of Tuberculosis, we give to the readers of the Medical Era the full text of that portion of the address devoted to this topic.

"But now, how is it with the susceptibility of man to bovine tuberculosis? This question is far more important to us than that of the susceptibility of cattle to human tuberculosis, highly important as that is, too. It is impossible to give this question a direct answer, because, of course, the experimental investigation of it with human beings is out of the question. Indirectly, however, we can try to approach it. It is well known that the milk and butter consumed in great cities very often contain large quantities of the bacilli of bovine tuberculosis in a living condition, as the numerous infection experiments with such dairy products on animals have proved. Most of the inhabitants of such cities daily consume such living and perfectly virulent

bacilli of bovine tuberculosis, and unintentionally carry out the experiment which we are not at liberty to make. If the bacilli of bovine tuberculosis were able to infect human beings, many cases of tuberculosis caused by the consumption of alimenta containing tubercle bacilli could not but occur among the inhabitants of great cities, especially the children. And most medical men believe that this is actually the case.

"In reality, however, it is not so. That a case of tuberculosis has been caused by alimenta can be assumed with certainty only when the intestine suffers first—that is, when a so-called primary tuberculosis of the intestines is found. But such cases are extremely rare. Among many cases of tuberculosis examined after death, I myself remember having seen primary tuberculosis of the intestine only twice. Among the great post-mortem material of the Charite Hospital in Berlin ten cases of primary tuberculosis of the intestine occurred in five years. Among 933 cases of tuberculosis in children at the Emperor and Empress Frederick's Hospital for Children, Baginsky never found tuberculosis of the intestine without simultaneous disease of the lungs and the bronchial glands. Among 3,104 necropsies of tuberculous children, Biedert observed only sixteen cases of primary tuberculosis of the intestine. I could cite from the literature of the subject many more statistics of the same kind, all indubitably showing that primary tuberculosis of the intestine, especially among children, is a comparatively rare disease, and of these few cases that have been enumerated, it is by no means certain that they were due to infection by bovine tuberculosis. It is just as likely that they were caused by the widely propagated bacilli of human tuberculosis, which may have got into the digestive canal in some way or other—for instance, by swallowing saliva from the mouth. Hitherto nobody could decide with certainty in such a case whether the tuberculosis of the intestine was of human or of animal origin. Now we can diagnose them. All that is necessary is to cultivate in pure culture the tubercle bacilli found in the tuberculous material, and to ascertain whether they belong to bovine tuberculosis by inoculating cattle with them. For this purpose I recommend subcutaneous injection, which yields quite specially characteristic and convincing results. For half a year past I have occupied myself with such investigations, but, owing to the rareness of the disease in question, the number of the cases I have been able to investigate is small.

What has hitherto resulted from this investigation does not speak for the assumption that bovine tuberculosis occurs in man.

"Though the important question whether man is susceptible to bovine tuberculosis at all is not yet absolutely decided, and will not admit of absolute decision to-day or to-morrow, one is nevertheless already at liberty to say that, if such a susceptibility really exists, the infection of human beings is but a very rare occurrence. I should estimate the extent of the infection by the milk and flesh of tuberculous cattle, and the butter made of their milk, as hardly greater than that of hereditary transmission, and I therefore do not deem it advisable to take any measures against it."

It will be seen that Dr. Koch does not deny the possibility of such transmission, but his statement is that it is so rare that he does not think it of sufficient importance to demand the use of measures against it. In this matter, Dr. Koch's dictum will not be accepted without wide investigation and experiment. We shall await the result with interest.

The Practitioner and His Finances.

The man who neglects to secure his financial position by careful investments, insurance, and prompt collection of bills, may arrive at the age when he ought to cease active practice, and yet be obliged to continue to make his daily living. Too often keen, able practitioners develop into querulous, jealous, disappointed old men, because they are obliged to compete with the younger men when they ought to have retired with honors. — Medical News.

In small abscesses, occurring in infected wounds, whether they involve the whole or only a portion of the wound, there is no better treatment than the removal of stitches, washing out with peroxide of hydrogen, and thoroughly painting the pyogenic surfaces with tincture of iodine.

ORIGINAL ARTICLES

BRONCHO-PNEUMONIA.

BY CH. GATCHELL, M. D., CHICAGO.

PROFESSOR OF DISEASES OF THE CHEST AND PHYSICAL DIAGNOSIS IN THE CHICAGO HOMOEOPATHIC MEDICAL COLLEGE; ATTENDING PHYSICIAN TO COOK COUNTY HOSPITAL.

Synonyms.

Lobular pneumonia; catarrhal pneumonia; disseminated pneumonia. (Capillary bronchitis by some authorities is considered as being identical with broncho-pneumonia. Others treat of these as separate conditions.)

Definition.

Broncho-pneumonia is an inflammation of the air-vesicles and the lung parenchyma, occurring in single lobules or in groups of adjacent lobules. The inflamed areas occur in isolated patches in different parts of the lungs; there is always more or less capillary bronchitis, as well as inflammation of the mucous membrane of the larger tubes.

Varieties.

(a) Acute lobular pneumonia; (idiopathic, or preceded by catarrhal bronchitis).

(b) Secondary lobular pneumonia; follows whooping-cough, scarlet fever, measles, etc. Aspiration pneumonia occurs after etherization or the coma of apoplexy, uremia, or other conditions in which the larynx loses its sensibility.

(c) Embolic lobular pneumonia; it follows endocarditis, pyemia, etc.

Etiology.

Age.—The extremes of life; it is most frequent in infants and young children.

Conditions.

Environment. — Exposure to cold; impure air. Bodily. — Rickets; chronic diarrhea; malnutrition; cachexia.

Season.

Winter and spring.

Bacteriology.

The local inflammation is excited by a pathogenic micro-organism. In most cases it is the streptococcus; in some, the bacillus pneumoniae.

Pathology.

With the inflammation of the lobules

there is always accompanying bronchitis. There is an associated bronchiolitis, as well as a catarrhal inflammation of the mucous membrane of the larger tubes. The affected alveoli become filled with the products of inflammation, consisting of cast-off epithelial cells, leucocytes, and mucus. There is no fibrinous exudation. The bronchioles adjacent to the alveoli become filled with secretion, and the mucous membrane is soft and swollen and of a dark red color. Not only is the lining membrane of the alveoli inflamed, but it is characteristic of lobular pneumonia that the lung parenchyma shares in the inflammatory process. In the interstitial tissue the capillaries are enlarged, and there is round-cell infiltration.

Bronchial Glands.

These are enlarged and softened.

Location of Affected Lobules.

They are irregularly scattered in both lungs; more abundant in the lower lobes and along the borders of the lobes. Some are deep-seated; others are at the pleural surface. The latter are wedge-shaped; the overlying pleura is inflamed.

Resolution.

When resolution occurs the contents of the alveoli undergo fatty metamorphosis. The fat is emulsified in serum and the liquefied product is absorbed or expectorated.

Extent of Lung Involved.

In mild cases there will be widely-scattered lobules affected.

Size of Affected Lobules.

In a mild case the diseased area varies from the size of a pea to that of a marble. Between the affected areas there is healthy and crepitant lung tissue. With progressive inflammation many adjacent lobules may share in the inflammation, and thus large areas of lung substance become involved.

Degenerative Processes.

In some cases the inflammation may result in suppuration and abscess. With this there may be destruction of lung tissue and formation of cavities. In other cases there is casous degeneration; in others, gangrenous; in others, interstitial inflammation leading to chronic interstitial pneumonia.

Embolic Lobular Pneumonia.

In this form the inflammation is due to the lodgment of an embolus; or, in other cases, to the formation of a thrombus in the branches of the pulmonary artery. In pyemia the emboli are septic, causing inflammation and suppuration.

Pathological Anatomy.

The mucous membrane of the trachea and bronchi in some cases is normal; in others, it is congested. The small bronchi almost invariably show signs of inflammation. Irregular patches of consolidated lobules are found scattered throughout the lungs. The air vesicles are found filled with detritus, epithelium and leucocytes. There is edema about consolidated spots; there are also scattered atelectatic spots and some emphysematous areas.

Nature of the Inflammation.

In bronchial pneumonia the inflammation is productive; i. e., there is a tendency to the formation of new tissue, especially interstitial and peribronchial. It is this fact that gives a tendency to interstitial fibrosis as a sequel to this disease.

Symptoms.

Chill; an idiopathic case is usually ushered in by a slight chill or a succession of chilly sensations. There may be repeated chills, marking an extension of the diseased process in the new areas of the lungs. This symptom is always significant.

Fever.

The fever range is of the continuous type, though marked by remissions and exacerbations. This variability of the temperature, which denotes extension at intervals into new territory, is an important sign of the fever of broncho-pneumonia, and is to be taken into consideration in diagnosis and prognosis. The temperature often rises as high as 104° and 105° F.

Skin.

It is usually moist, with a tendency to perspiration.

Pulse.

The pulse is rapid — 120, 130, and in extreme cases, 150 and 160. There is in-

crease in pulse rate with each extension of the disease and exacerbation of the temperature. The quality of the pulse is soft and compressible; it is sometimes irregular.

Respiration.

Respirations are always rapid — as high as 30, 40, and sometimes even more. There is great dyspnea.

Cough.

Cough is almost always present; in young children it may be absent.

Expectoration.

Generally present, but not great in quantity; in young children it is swallowed. In character it may be mucous, catarrhal, or muco-purulent.

Cerebral Symptoms.

Usually the mind is clear. With carbonization of the blood there may be obscuration of the mental faculties; in children, sometimes delirium.

Pain.

There are sharp, stitching pains in various parts of the chest when the pleura is involved.

BRONCHO-PNEUMONIA IN CHILDREN.

Broncho-pneumonia in infants pursues a course so different from that in adults as to merit separate description.

Onset.

Convulsions usually replace the chill.

Nervous Symptoms.

There is great restlessness and extreme prostration.

Respiration.

It is very rapid — from 40 to 80 per minute.

Fever.

The temperature rises rapidly following the onset; it soon runs up to 104° to 105° F. Its course is marked by extreme remissions and exacerbations.

Pulse.

It is usually very rapid; varying from 120 to 170 or more.

Tongue.

Early, it has a white, heavy coating, which later becomes brown and dry.

Gastro-Enteric Symptoms.

The child takes nourishment with

great difficulty. There is sometimes vomiting. In some cases there is diarrhea.

Urine.

Is scanty and high colored.

Skin.

It is moist and perspiring.

Course and Duration.

If the disease is extensive at the onset, involving a large number of lobules, with corresponding severity of the other symptoms, the case may end fatally in a few days. In other cases, with mild onset, the case may be progressing favorably when suddenly with extension of the disease into new areas the temperature, from 100, may run up to 105° or more within a few hours, and the case be rapidly fatal. In severe cases the course of the disease is from one to two weeks. Some cases persist with irregular remissions and exacerbations for six or eight weeks before convalescence begins.

Prognosis.

The younger the child the more grave the prognosis. In older children in secondary broncho-pneumonia the prognosis is more favorable. The prognosis must always be guarded, for sudden extension of the disease to previously unaffected portions of the lung may at any time change the aspect of the case in a few hours.

Resolution.

The termination of the disease is always by lysis.

Cerebral Symptoms.

In some cases these predominate. There may be great restlessness and delirium, interrupted by repeated convulsions. The accompanying symptoms are, rolling of the head, high fever, great prostration, vomiting, and other symptoms of meningitis.

Strumous Cases.

In children with tuberculous diathesis the lungs become much congested; there is great prostration, high temperature, great loss of flesh, and swollen lymphatic glands. Such a condition renders the prognosis grave.

BRONCHO-PNEUMONIA IN THE ADULT.

Onset.

There is usually a distinct chill, or a succession of chills.

Pain.

There is pain in the chest; also headache and backache.

Stomach.

Vomiting sometimes occurs.

Fever.

The temperature soon runs to 104° and 105° F. In the very aged the range may be 102° and 103° F.

Pulse

Rapid and feeble.

Cough.

At first, dry; in a few hours, profuse mucous expectoration; sometimes blood-stained.

Urine.

Scanty; sometimes albuminous.

General Condition.

There is rapid prostration; great restlessness; sometimes delirium.

Bowels.

Usually there is constipation; sometimes diarrhea.

Respiration

Rapid; 30, 40 or more. Great dyspnea.

Skin.

Moist and clammy; often free perspiration.

Complications.

In the aged there is usually much accompanying bronchitis; also often emphysema, bronchial asthma, sclerosis of the lung.

Course and Duration.

In middle life the disease lasts from ten to twenty days; termination is by lysis. In the very aged most cases are fatal. In a case pursuing a mild course with moderate temperature and pulse, the entire aspect may be changed in twenty-four hours, owing to the invasion of new areas of lung tissue.

PHYSICAL DIAGNOSIS.

Inspection.

This reveals rapid respiration, livid color of the skin, and moist surface.

Palpation.

It reveals vocal fremitus over consolidated portions, if the area of consolidation is extensive; otherwise, the results are negative.

Percussion.

It reveals higher pitched note over consolidated areas. If the consolidated portion is slight there may be hyper-resonance.

Auscultation.

Crepitation is heard over the affected portion; also, according to the extent and degree of the accompanying bronchitis, subcrepitant and fine and coarse mucous rales. Between the points corresponding to diseased lung tissue, normal sounds may be heard; this is characteristic of broncho-pneumonia.

Differential Diagnosis.

From lobar-pneumonia: — note that there is absence of rusty sputum; of dry, hot skin; of extensive crepitation, and signs of consolidation. From pluri-sy: — lobular pneumonia there is no friction sound, pains are less severe, and there are no signs which would accompany effusion. From early phthisis: — there is no apical infiltration; no regular rise of evening temperature, and the sputum is of different character.

Prognosis.

Favorable: — In middle life; good constitutional condition; small extent of lung tissue involved; sthenic cases. Unfavorable: — Extremes of age; cachexia; great extent of lung tissue involved; asthenic cases.

Cause of Death.

Asthenia; asphyxia; complications.

Sequels.

Chronic bronchitis; phthisis; pulmonary sclerosis.

TREATMENT.**GENERAL MEASURES.****Sick-Room.**

It should be well ventilated. Maintain a temperature of 70° F; keep the air moist.

Patient.

Change the patient's position frequently. When expectoration is difficult, lower

the patient's shoulders and raise the hips, so that there may be a "down-hill" cough.

Chest.

Sponge the chest at intervals with hot water and dry carefully. In a case of high temperature with dry, hot skin, use tepid sponges. Avoid the use of poultices. If there is local pain, the best application is a hot compress. If the fever is high and the skin of the chest is hot, do not bundle the chest in any way. Let the patient wear a light muslin shirt. On the other hand, if the surface of the chest is cool and moist, let the patient wear a cotton jacket. Kneading and manipulating the chest will aid in the muscular effect; this is especially important in young children and in the very feeble.

Diet.

With this disease there is generally great prostration; hence the patient should have a liberal and nutritious diet; good sustaining treatment is demanded.

Heart.

In threatened heart-failure give the usual cardiac stimulants; a hot compress applied directly over the heart, at intervals, is helpful at such times.

Cough.

When the cough is distressing, give mucilaginous drinks.

MEDICINAL TREATMENT.

BELLADONNA. — (3x) — Especially in children, and only in the early stages of the disease. Much accompanying congestion; active fever; moist skin; respiration rapid; moaning; cerebral excitement.

ACONITE. — (1x) — This is to be used when with the local inflammation there is accompanying systemic fever, with high temperature and circulatory excitement. Hence, it is most often called for early in the attack. But it need not be limited to this period, for so long as there continues to be febrile action, Aconite will aid the action of other medicines by calming the nervous erethism.

Indications. — Fever; rapid pulse; painful cough, with sensitiveness to inspired air; hoarseness; expectoration

blood-streaked, the blood being bright red; respiration impeded; anxiety; stitching pains in the chest.

Special Indications. — Feverish action, with vaso-motor disturbance; restlessness, from nervous erethism. Dry cough; or, expectoration tinged with bright-red blood.

FERRUM PHOS. — (2x) — The action is limited to the early stage, when there is active congestion of the lungs, with its attendant symptoms. This is the key to its use — a state of engorgement, before the later pathological changes, such as abundant catarrhal secretion, etc., have taken place. Aconite has a similar sphere, but the fever is more active, with restlessness and great nervous erethism, and a hard pulse.

Indications. — Congestion of the lungs; moderate fever; pulse full and soft; chest feels sore and bruised; scanty, blood-streaked sputum; sonorous and sibilant rales.

PHOSPHORUS. — (2x) — This is to be used especially when the disease occurs in cachectic, delicate subjects, and in secondary broncho-pneumonia after exhausting diseases; in subjects of Bright's disease, diabetes, and in fatty degeneration of organs. Also in cases that sink into a low, typhoid-like condition.

Indications. — Cachexia, or typhoid-like state; moderate fever; great oppression of the chest; rawness in larynx and trachea; expectoration purulent, or muco-purulent; mucus streaked with dark blood; abundant rales; sticky perspiration; weak, soft pulse; emaciation and prostration.

TARTAR EMET. — (2x) — The most important remedy in the treatment of this affection.

Indications. — Fine and coarse mucous rales; rapid respiration; oppressed breathing; cyanosis; lips blue; cool surface; sweat; feeble heart's action.

ANTIMONIUM ARS. — (2x) — Broncho-pneumonia of the aged, with loud rales and feeble heart.

BRYONIA. — (1x) — Accompanying pleurisy, with stitching pains; soreness in the chest; children cry when coughing.

SUMMARY OF PHARMACODYNAMICS AND THERAPEUTICS.

[The following excerpts are from the volume of the Journal of the British Homeopathic Society, edited by Dr. Richard Hughes.]

PHARMACODYNAMICS.

Calomel.

Struck by the good effects of minute doses of calomel in cirrhosis of the liver, Dr. Jousset has experimented with it on rabbits in the laboratory of the Hopital St. Jacques. He finds the condition of liver set up by it to be precisely that of the initial stages of cirrhosis. — L'Art Medical.

Finding a similar condition set up in the kidneys, he has tried the drug in renal dropsy also, and relates a case in which anasarca cleared away nicely under its use, in doses of about 1-33 gr. — Ibid.

Carduus Marianus.

Dr. Bourzutscky speaks enthusiastically of the virtues of this drug in cholelithiasis, when the attacks recur frequently. He gives four drops of the tincture three times a day. — Hahn. Monthly.

Ceanothus.

Over and above the action of this drug on the spleen, Dr. Fahnestock writes to recommend it in the leucorrhœa of girls with anemia and left infra-mammary pain. — Med. Century.

A malarial spleen, tender as well as enlarged, became normal in three weeks under the action of the mother-tincture. — Monthly Hom. Review.

Cedron.

Dr. Robert Boocock writes to praise cedron (which he seems to give pretty high) as an anti-neuralgic. The only indication he gives for it is that the extremities of the nerves are the seat of pain. — Amer. Homeopathist.

Digitalis.

In using this drug for cardiac dropsy, Dr. Jousset now prefers a preparation he calls "digitaline chloroformique." Of a solution of one part in a thousand, he gives either a single dose of thirty to forty drops, allowing it to act, which it often does for seven or eight days; or he orders

four drops in divided doses per diem for some time. The former plan answers best in confirmed asystolia, with much-diminished urine; the latter in less severe cases. — *L'Art Medical*.

Guarea.

Besides chemosis and lachrymation, guarea seems to find a place in ophthalmic practice where pterygium has to be removed. Dr. W. N. Forster reports two cases, and refers to a third, where it effected this purpose. He gave the 3x internally, and used an aqueous 1x by instillation. — *Medical Century*.

Heart-Medicoles.

In a paper presented to the Paris International Congress, and translated in the February number of the *Monthly Homeopathic Review*, Dr. Bernard Arnulphy adds his weighty testimony to the value of crategus as a cardiac tonic, he having experienced its good effects in his own person. He also speaks warmly of naja in endocarditis, acute and chronic, especially where the mitral valve is the seat of disease. This he gives from the 6th to the 30th, but crategus in the mother-tincture. Some further facts about the latter drug are brought together later on in the same journal (P. 94).

Hellebore.

Dr. Cooper has "A Note on the Hellebores" in the *Homeopathic World* for April, in which he adduces reasons for believing the case of poisoning numbered II. 2 in the "Cyclopedia of Drug Pathogenesy" under "Veratrum viride" to have been really caused by the helleborus viridis, which belongs to quite a different order.

Hypericum.

Dr. Talcott reports a case of progressive muscular atrophy due to a spinal injury where Dr. Seguin prophesied death within two years, but where hypericum so checked the disease and improved the condition that after twenty years the patient still survives. — *North Am. Journ. of Hom.*

"Hypotensive Medication."

By this name Dr. Huchard describes the continued use of such drugs as amyl nitrite and trinitrine, with a view of re-

laxing undue tension in commencing arterio-sclerosis and other such conditions. Wishing to find a slower but more lasting relaxant of the vessels, he thinks he has found it in "tetranitrol," a nitrite of erytrol, the action of each dose of which lasts for four or five hours, so that three in a day will suffice for the purpose. — *L'Art Medical*.

Oleum O livæ.

Cohnheim advises wineglassful doses of olive oil, taken before food, as giving great relief in painful affections of the stomach; and Mathieu confirms the recommendation. — *Hom. Recorder*.

Onosmodium.

Dr. A. B. Norton contributes his weighty testimony to the value of onosmodium in headaches from eye-strain. Even when the proper correction of refraction cannot be made, great amelioration will follow the use of the drug. A tired feeling, locally and generally, is a great indication for it. — *New England Med. Gazette*.

Rhus.

A study of the action of rhus toxicodendron on the eye is excerpted from the *Homeopathic Eye, Ear and Throat Journal* in the *Monthly Homeopathic Review* for January. It is written by Dr. Charles Deady, of New York, and he makes several fresh applications of the drug. Among other things, he says that he has used it many times with complete success for the beginnings of sympathetic ophthalmia.

Terebinthina.

Dr. Marc Jousset records two cases of bronchial asthma in which striking benefit resulted from terebinthina, ten drops of the first dil. three times a day. He was led to its choice by coincident hematuria in the first case, but no such indication led to it in the second. — *L'Art Medical*.

Thyroidin.

The run upon this substance is already showing a crop of pathogenetic effects resulting from its too lavish employment. A serious one lately reported is optic neuritis, with associated lesions of the disc, more pronounced than in poisoning from tobacco or alcohol. Accommodative as-

thenopia also has been noticed. — Hahn. Monthly and Monthly Hom. Review.

Tuberculinum.

Dr. Howard W. Long finds that this nosode, even if it does not cure phthisis, will greatly ameliorate the distressing cough. He gives the 15th dil. — Hahn. Monthly.

Urtica Urens.

Dr. W. H. Proctor relates two cases in which severe and long-lasting pain in the deltoid yielded rapidly to urtica urens, given on the supposition that the suffering arose from retention of uric acid in the system. Burning in the skin after sleeping was in one case the symptom which led to its choice. The remedy was given (after Burnett's manner) in ten-drop doses of the mother-tincture. — Amer. Homeopathist.

THERAPEUTICS.

Aortitis.

Dr. Jousset reports another case of chronic aortitis, in which great improvement occurred under iodide of sodium, followed up by sparteine. — L'Art Medical.

Cancer.

Dr. Van Deursen, of Lowell, Mass., reports three cases of ulcerated epithelioma of the face making a good recovery under the late Dr. J. S. Mitchell's plan of giving the 3x trit. of arsenic internally while dusting the 2x trit. over the sore. — N. Eng. Med. Gazette.

Dysmenorrhœa.

A lady, aged 26, dark hair and blue eyes, rather stout, very nervous, had for several years been obliged to keep her bed for two or three days during menstruation. About eight hours after the appearance of the menses she had the most excruciating pains, sometimes in the ovarian region, sometimes all through the abdomen, often accompanied by headache, nausea, and vomiting. She could only obtain relief by keeping warm in bed and applying hot fomentations. She got magn. phos. in hot water every ten to fifteen minutes while the pain lasted, and the effect was so surprising that she thought she was taking

morphia. After a few doses the pain was relieved and she fell asleep. After three months of this treatment with magn. and calc. phos. she got so well that menstruation was no longer dreaded. — A. h. Z.

Empyema.

Dr. O. S. Haines relates a case of empyema in an adult, where the matter found its way into a bronchial tube, and was expectorated. The recovery, which was perfect, seemed greatly furthered by the continuous use of calcarea sulphurica 3x (which Schussler in the last edition of his book excludes from among his tissue remedies because it does not conform to his theoretic canons). — Hahn. Monthly.

Hemiplegia.

Dr. E. Boyer brings forward a case of hemiplegia which, remaining unchanged for five months after the primal stroke, began to improve at once on the administration of causticum, and went on to complete restoration of power, though the contractures which had supervened remained. The 6th and 12th dilutions were given. — Revue Hom. Française.

Hydrarthrosis Intermittens.

A case of this rare disease is contributed to the Homeopathic World of March by Dr. Macnish. The swelling came on Thursday in every week, alternating between the right and left joints. After failure of pathologically-indicated remedies this "clock-work periodicity" led to the choice of cedron, which, given in the 3x dilution, broke the spell; and the disease of nineteen years' standing gradually died away.

Orchitis Tuberculosa.

Dr. Boessor, of Chemnitz, reports a case of acute orchitis occurring in a tuberculous subject, with no history of gonorrhea or mechanical injury. Rapid improvement and speedy cure resulted from the employment of tuberculin 30. Similar results occurred in a like subject who had an acute painful swelling of the knee-joint. — Hahn. Monthly.

Ozena.

"Hamen treats ozena with citric acid in the following way: The patient uses every morning a nasal douche and frees

the nasal fossa as far as possible from pus and crusts. He then insufflates three times a day into the nostrils a powder composed of citric acid and sugar, equal parts. The odor disappears immediately and does not return for some days after the insufflations have been discontinued. Finally even the secretion is found to be diminished; while the effect on the general health and spirits is very marked." — Pacific Coast Journal of Homeopathy.

Parotitis Septica.

Dr. Biggar relates five cases in which septic inflammation of the parotid seemed to have been arrested by the administration of lachesis in medium dilutions. — N. Amer. Journ. of Hom.

Sneezing.

In a victim of chronic sneezing (of eighteen years' standing), finding a sensation of crawling, prickling and dryness present, Dr. Schott gave wyethia, and by the end of three months the sneezing had permanently ceased. — N. Amer. Journ. of Hom.

Tumors.

Mr. Hurndall, our veterinary colleague, contributes to the Monthly Homeopathic Review of December and January last two cases of tumors in dogs cured by homeopathic medication. In the first the growth was on the scrotum, and seemed fibrous; here calcarea carb. 30 proved curative. In the second the general health was gravely affected; and two growths were discovered "apparently slung in the mesentery, just posterior to the middle lobe of the liver." Here arsenicum was the remedy, in potencies rising from the 3d to the 12th decimal.

Varicose Ulcer.

Dr. V. Leon Simon records a case of varicose ulcer of some months' standing, in which complete cicatrisation occurred in nine days under the action of clematis 3. — Revue Hom. Francaise.

Whooping-Cough.

In an article on this disease in the Monthly Homeopathic Review of December, Dr. Roberson Day describes the treatment as "most satisfactory." His

sheet-anchor is *drosera*, and this he finds acts best in the 30th dilution.

Worms.

For lumbrici and ascarides, Drs. M. M. Gardner and T. L. Bradford write to commend Teste's prescription of *ippecacuanha*, *veratrum*, and *lycopodium*, only giving them in lower potencies, and adding *santonine* 1x to the series. To kill ascarides locally, Dr. Bradford finds inunction of olive oil effectual. — Amer. Homeopathist.

MERCURY — ITS ACTION UPON THE SYSTEM.

(Note.—This article, which is by William Henry Porter, M. D., of the New York Post-Graduate School and Hospital, and published in the "Post-Graduate," we give to the readers of the Medical Era for the reason that homeopathic physicians especially should have through knowledge of the physiological action of drugs. The article, we think, is very instructive in this respect. We, however, question the theory of action so far as it is explained from the standpoint of mechanical irritation by the particles of mercury. As a remedy in syphilis and other diseases mercury certainly has a dynamic action, as all homeopaths will agree.—Ed.)

To further study so old and frequently used a remedy as mercury might at first seem uncalled for, yet it is quite apparent that in many respects its action is a question of doubt.

To understand the full possibilities of mercury upon the system as a whole its action upon the liver must be accurately apprehended. This accomplished, it is easy to understand how its action upon the other portions of the body is brought about, as all its actions upon the system are secondary and largely if not wholly dependent upon the changes wrought in the function of the liver, digestion and assimilation, in consequence of the primary action upon the hepatic cellular protoplasm.

Therefore, if we begin our study of the action of the mercurials upon the hepatic function, we find that their action is exercised in three successive characteristically distinctive stages, to wit: as a stimulant, as a so-called cholagogue, or one that greatly augments the secretion

of bile, and as a depressant, or one that greatly decreases the flow of bile.

As a mild chlorid, proto-chlorid or calomel, possesses all these qualities to a marked degree, it is perhaps the best example by which to elucidate the complete action of mercury upon the hepatic and digestive functions.

A word may be said at this point regarding the fear that some entertain from the administration of calomel and hydrochloric acid at or nearly the same time, fearing thereby to produce the bichlorid and cause intense toxic symptoms. Only recently an instance of this kind was brought to my attention.

The history of the case in brief was as follows: Master H., a lad about nine and one-half years old, had suffered from an attack of pneumonia, from which he made a fairly good recovery. With the subsidence of the pneumonic inflammation, however, there developed, as frequently happens, in spite of all that can be done therapeutically, a pleuritic inflammation which ran rapidly on into the purulent stage, so that in the course of a week or ten days after recovering from his pneumonia, a fully developed empyema confronted the medical attendant. A surgeon was called, and a small opening made between the ribs, the pus drawn off and a drainage tube inserted. This decidedly improved the condition, and for a few days there was marked improvement in all the symptoms, but at the end of a week or so the temperature rose, and all the symptoms became more aggravated; the surgeon was again called and the opening enlarged. This, however, again closed in part, the temperature ran high, with recurring chilly sensations and great nervousness, the bowels constipated. It was at this point that my opinion was sought. A careful investigation of the case eliminated any tubercular involvement, and all the aggravated symptoms seemed to be due in part to the absorption of the poorly drained pus cavity, and a decided inaction of all the excretory organs. If in the beginning a rib had been removed and the pus cavity thoroughly cleansed, and the excretory glands kept active thereafter, it is highly

probable that the case would not have drifted into the unfavorable condition that it did.

It was at this stage of the case that calomel was suggested with the view of exciting a better glandular action, thus enabling the system to rid itself of the toxic products, which were accumulating within the system, both from the pus cavity and from the putrefactive changes in the alimentary canal, as evidenced by an abundance of indican in the urine. The urine also contained an abundant excess of uric acid, but was free from albumin and sugar.

At the time that the calomel was given the lad was also taking a few drops of dilute hydrochloric acid. The family became very much exercised because they were told by the attending physician that the administration of calomel in conjunction with the acid would give rise to the most intense poisoning. The actual results, however, of giving the two drugs were that the bowels moved freely, glandular action in general was augmented, the temperature fell, all the symptoms improved, and the case thereafter made steady progress for the better.

If we look into this matter of the administration of calomel at the same time that hydrochloric acid is being given, it must be remembered that the stomach is more or less constantly secreting hydrochloric acid, hence it becomes almost impossible to introduce calomel into the gastric cavity without its coming into contact with this acid. The addition of a few more drops of the dilute acid in the form of a therapeutic agent cannot increase to any marked degree the liability for the conversion of the calomel into a bichlorid.

While it is a well known fact that calomel can be converted into the bichlorid of mercury, the conditions for this conversion as given in Brand and Taylor's "Medical Chemistry," do not exist in the stomach cavity. The chemical conditions required for this conversion are as follows:

"By hot hydrochloric acid calomel is resolved into mercury and corrosive sublimate; but when boiled in dilute hydro-

chloric acid, a portion is dissolved without decomposition."* The above would indicate that concentrated hydrochloric acid was used, and in the latter the boiling temperature was required, neither of which conditions ever occurs in the human stomach. Therefore all fear of the conversion of calomel into the bichlorid or the development of this poisonous form of mercury seems to be absolutely groundless so far as the chemical facts are concerned. Clinical experience of an abundant character also demonstrates the same fact. It seems unfortunate, therefore, that such false fears should be entertained, because it gives rise to an unnecessary amount of anxiety on the part of the laity.

The *massa hydrargyrum* or blue mass, and the *hydradgyrum creta* or gray powder, act in a manner similar to calomel; but if anything are a little less active.

The corrosive sublimate or bichlorid of mercury has a similar action, but its more irritating properties make it less valuable, or even useless, as a general cathartic principle. Still it can be, and often is, used as a powerful hepatic stimulant, and as an adjunct to the cholagogue function of calomel is of inestimable value. In fact, we find many instances in which the protoplasm of the hepatic cells has become so sluggish that the insoluble calomel is not sufficiently irritating to excite them into activity. In these cases the addition of the soluble and more active bichlorid often works like magic.

The exact *modus operandi* by which mercury in any form produces the wonderful results upon the system that have been attributed to it for ages, has always been more or less in doubt for the lack of a logical chemical and physiological explanation; yet the most skeptical, after watching the effects of a few doses of this drug upon the human system, cannot deny the power and utility of mercury.

Taking the stand, which now appears to be pretty generally accepted, that the inorganic compounds are not decomposed within the animal organism, no time need be wasted in speculation re-

garding the decomposition of any of the mercurials into other compounds.

How, then, shall the action of mercury and its compounds be explained? Calomel, for instance, is almost insoluble; consequently, it in itself is comparatively non-irritating to the intestinal tract. At the same time it is known to be one of the most active cathartic compounds of mercury, in doses that can safely be used — two almost contradictory propositions.

The cholagogue action of calomel cannot be explained by any direct irritating action which it can produce upon the alimentary tract, for it is non-irritating to the intestinal mucous membrane, but its cathartic action can be explained through the increased intestinal peristalsis, caused by reflex irritation, due to an increased flow of the bile acids.

This non-irritating character of the calomel upon the mucous membranes is just what gives it its chief power. Passing along down the alimentary tract without producing irritation, it is steadily absorbed into the entero-hepatic circulation and carried up to the liver. At this point of the animal economy, the mercurial appears to act like a foreign body, toxic in nature, and the hepatic cells, by their secretive action and power to guard the system against foreign invasion, pick up the little particles of calomel from the blood, and eject them into the capillary bile ducts. In accomplishing this task, the hepatic cells are called upon to perform more work; and if the amount of calomel passed through the liver is small, its action is simply to stimulate the organ to a little greater activity. For a time the hepatic cells secrete a little larger quantity of the bile acids and pigments, but no more of the acids than can be readily converted into the salts of the bile acids. Up to this point the calomel has only been stimulating and physiological in its action. If now calomel is administered in larger quantities — either by the frequently repeated small doses, or in one large dose — the eliminating action of the hepatic gland is greatly augmented. At the same time the protoplasmic elements which consti-

*Brand and Taylor's "Medical Chemistry."

tute the hepatic cells, are stimulated by the passage of this foreign body through their substance, to a more active production and elimination of the bile acids. When sufficient calomel has reached the liver to produce this copious flow of bile acids, the acids are discharged into the capillary bile ducts more rapidly than they can react upon the alkaline phosphates or carbonates, and form the normal and neutral bile salts. When this hyper-secretion of the bile acids is established, a cholagogue action is developed. This action, however, can only be temporary in character, because the protoplasmic chemical activity of the hepatic cells will in a comparatively short time be exhausted. After this excessive production of the bile acids and their discharge, together with the calomel, there is a period of protoplasmic inactivity, in which the bile-producing function of the liver is held in abeyance. Viewed in this light, calomel and its class of mercurials may be stimulating, cholagogue, and depressing in their action upon the functions of the hepatic gland — one condition following in quick succession after the other.

The rapid intestinal peristalsis and frequent discharges from the bowels are not the direct result of the mercurial action, but a secondary effect, which has been brought on by the irritating properties of the bile acids, so copiously discharged into the intestinal canals as already described. This fact is established by the lack of cathartic action by calomel in cases of occlusion of the common bile duct as demonstrated experimentally by ligating the duct, and clinically where tumors have occluded the duct; and further by the counter test that where bile acids are administered medicinally where the common duct is occluded, a brisk cathartic and cholagogue action is at once established.

The hyper-secretion of the bile acids and its consequent effect upon the intestinal tract is not in any sense a physiological action, but it is strictly a pathological process. But by developing this abnormal condition in the functional activity of the hepatic gland, the liver cells

are stimulated to perform an abnormal amount of work, often reaching a stage that may be called vicarious in its nature, and by which the hepatic cells are empowered to expel many abnormal and by-products from the system — a task which in their normal condition they are absolutely unable to perform. In this manner nature rids herself and the whole system of many foreign and offending substances which, if allowed to remain and multiply within the system, would, in a very short time, destroy the animal vitality — a result too often seen in cases improperly treated.

It is by this same irritating and stimulating effect upon the hepatic cells that their protoplasm is more rapidly oxidized and displaced, thus exciting a more rapid absorption and isomeric transmutation of the proteid constituents of the blood into protoplasm of the hepatic cells. In this manner the inactive, sluggish and often absolutely pathological protoplasm of the cells is displaced and replaced by that which is physiological. With this progressive improvement in the nutritive tone of the liver, general assimilation will be augmented, and in due time similar changes will be wrought in all the structures and glands of the body, until a thoroughly diseased and pathological subject is converted into one that can fully perform its physiological functions.

The period of inaction, which is imposed upon the hepatic cells as a sequel to this excessive action gives the protoplasm elements this chance to rest and to imbibe this more serviceable nutritive pabulum — thus augmenting their nutrition and enhancing their functional vitality as just described.

When the hepatic cells again resume their physiological work, they are in a condition of high nutritive tone; and consequently the secretory and excretory work of the liver is more perfectly effected.

The intestinal and hepatic transmutation of the food elements is now more perfectly accomplished, and as a natural sequence as already stated, all the nutritive processes of the body are intensified;

secretion and excretion in general are now perfectly performed; and the animal vitality is raised to a higher standard, even to a normal state, provided the damage to the protoplasmic structures has not gone too far before inaugurating the proper mercurial line of medication.

If the system has been poisoned by any form of microbic, ptomain or toxic poison, or is the seat of any inflammatory action — toxic or otherwise — the organism is, by the above described processes, placed in the best possible condition to destroy the etiological factors and remove the resulting pathological processes, and thus restore everything to a normal condition. The so-called and well-known antiphlogistic power of the mercurials is easily understood with this conception of the physiological and pathological action of the mercurials. Even the stronger preparations, which cannot be used as cathartics, act by virtue of their power to stimulate the hepatic gland into increased activity and in a secondary manner augmenting digestion, absorption and assimilation, secretion and excretion of all the glands in the body.

In like manner its action as an anti-syphilitic remedy can be explained. Not by acting as a direct and chemical antidote to the syphilitic poison, because up to the present time we have no definite knowledge as to the exact character of the syphilitic poison, hence the absurdity of saying that a known quantity antidotes directly an unknown substance. On the other hand, we are justified in the assumption that the mercurials, which are known to augment the general glandular and nutritive activity of the system, raise the physiological tone to such a point that by its own inherent physiological action the system is enabled to rid itself of the syphilitic infection, whatever that may be, in the same manner that all toxic products are expelled from the system.

Following this method of action for the mercurials, ptialism, and all that class of symptoms produced by mercury and its compounds can be rationally explained. The same reasoning also shows clearly that the size of the single doses has little if anything to do in determin-

ing the liability to mercurial salivation. If, from any cause, the hepatic cells are too inactive, and thus fail to take up the mercurial from the blood as it flows past them, and fails to respond to the pressure of the mercurial salt, and to eliminate it through the bile ducts as speedily as it reaches the hepatic gland, then the mercurial will pass over into the general circulation, where finally the salivary glands will attempt to perform the work of eliminating that should have been accomplished by the liver cells.

In like manner when calomel is given too freely, or when opium is given to check the cathartic action, the hepatic cells become exhausted from over-taxation, or they are retarded in their action by the opium; and then in either instance the mercurial passes into the general circulation. Thus, again, the toxic symptoms with salivation will be produced.

So long, however, as the hepatic cells retain their secretive and excretory activity, it is absolutely impossible to develop the toxic symptoms of mercury. The use of enormous doses may at times become the cause of exhausting the hepatic cells wherefore poisoning will, of course, rapidly ensue. But, what more frequently occurs with the large dosage, is a quick stimulation of the hepatic cells, a copious discharge of the bile acids, and a sweeping of a large part of the mercurial from the alimentary tract before it can be absorbed, thus preventing the exhaustion of the cells consequent upon the elimination of an excessive amount of the mercurial salt.

The mercurial salts are often decidedly diuretic in their action by virtue of this general action upon the hepatic and assimilative function, which is followed by a better secretory and excretory action of all the glands of the body, and notably of the renal organs. In case the mercurial passes over into the general circulation, it is highly probable that some of the mercurial is eliminated through the protoplasmic elements of the renal cells, but its diuretic action is more often as above described.

In summing up, it may be said that the principal actions of the mercurials are:

1. Stimulant to the hepatic cells.
2. Cholagogue in action by virtue of exciting hyper-secretion of the bile acids.
3. Sedative due to the two previous actions.
4. That its alterative, antiphlogistic, antisyphilitic, diuretic actions, etc., are secondary to the above actions.
5. That ptialism from mercury is due to the inactivity of the hepatic cells, and to the salivary glands attempting to do what should have been done by the hepatic cells.

Nature of Noma.

Recent investigations show that there are probably a series of paradiphtheritic affections that further observation will make easily recognizable as such. Walsh showed before the Philadelphia Pathological Society during the spring that the phagedenic ulcer of the cheek, known as noma, which occurs in the course of measles in run-down patients is almost surely a constant manifestation of the presence of the diphtheria bacillus and its toxins in the neighborhood of the lesion. This explanation of the etiology of noma had been suggested before, but the observed cases were few. The last investigator added eight new observations of noma in which the diphtheria bacillus was demonstrated. This sets all doubt at rest as to the nature of the lesion. Needless to say this confirmation of previous observations suggests a very hopeful therapeutic outlook for an affection that has been hitherto extremely obstinate to treatment.

There are certain maladies which, though not intrinsically funny, are for some occult reason treated almost universally as a very good joke, except by the sufferers. Seasickness, the most familiar of these, is at last to be rescued from contempt.—N. Y. Sun.

In cases of delirium tremens, when the action of sedative drugs is apparently insufficient to obtain rest and sleep, a blister or a mustard plaster applied to the back of the neck often has an excellent effect.

The Easiest, Quickest, Safest, and Most Thorough Method of Removing the Third Tonsil.

The presence or absence of enlarged adenoids can usually be determined without a pharyngeal examination. There is general poor health of the children, in whom the growths seem to be especially found, accompanied by poor peripheral circulation, occlusion of the nostrils, with mouth-breathing and peculiar flattening of the nose, want of proper chest development, and a characteristic voice. The addition of other symptoms, such as ears subject to acute colds, the tendency to enlarged tonsils or to bronchitic attacks, the presence of conjunctivitis, ulcer of cornea or phlyctenular conjunctivitis, serve to confirm the diagnosis. The best evidence, of course, is to see and feel the growth. Of the methods of examination, digital examination through the mouth is usually much more easily accomplished, and on the whole gives a more accurate idea of the growth.

To make this examination, Lautenbach uses the index-finger of the right hand. The child is seated on a revolving chair with a swinging spittoon handy, his head is encircled by the left arm, the head is held gently but firmly to the operator's left chest, the left finger over the patient's forehead. The operator inserts the right index-finger on the right side of the mouth back to the soft palate, and then proceeds back of this up to the vault, which is quickly and thoroughly explored. A gag is not used in the child's mouth, but the first phalanx of the index-finger is protected by wrapping two or three layers of one-inch adhesive plaster about it, and then putting over this two or three turns of a doubled two-inch flannel roller bandage, the end of which is made secure by making one turn about the wrist. As the second turn is about to be made, the free end should be passed under the band already in position.

Any growth is removed by gouging it out with the nail of the index-finger, and if there are some parts of the growth so firmly attached that the finger-nail alone will not remove them, Lautenbach employs an artificial finger-nail, and does

not stop until every vestige of the growth is removed. The mass scraped off is allowed to run through the nose and mouth into the spittoon.

The examination and operation is preceded by a thorough alkaline and antiseptic cleansing of both throat and nose. Cocaine solution is then applied through the nose to somewhat dull the sensibility. After the operation the throat and nose are again thoroughly cleansed and antiseptized, and usually warm oleaginous sprays are ordered.

The operation is done by Lautenbach in from ten to twenty-five seconds.

The operation is safe, the child is entirely under control, the work is almost instantaneous, there is very little or no pain, and there is no shock following the operation.

Recurrence by this method is very rare, a result not attained when the cautery, curettes, and forceps are used. — *Pennsylvania Med. Journal.*

Boston has made a series of investigations to show that tuberculosis may be spread by coughing. He found that tuberculous patients, during the act of coughing, would eject a spray of fine droplets of sputum. He collected this spray of sputum on a mask, placed in front of the mouth and nostrils. He studied fifty cases of unquestionable tuberculosis. In thirty-eight of these he was able to detect tubercle bacilli in variable numbers in the spray ejected by coughing. The author suggests that this method of collecting may be of some value in the diagnosis, particularly in those cases of tuberculosis where the chest examination is unsatisfactory, and the sputum is swallowed. We are reminded that it is probable that a number of acute infectious diseases may be spread by coughing.

In operations on alcoholic subjects it is often necessary to watch the patient carefully, because delirium tremens may occur after any severe injury or operation, even in patients who have not touched alcohol for several weeks.

Cancer.

Park says the only hypotheses concerning cancer that are worth mentioning are the dietetic, the embryologic, the irritation and the parasitic theories, and that the dietetic theory is of importance only in case we may succeed in maintaining the parasitic nature of the disease. He believes cancer to be due to parasites, and that these parasites have been discovered in the Buffalo laboratory. The arguments adduced in favor of the parasitic hypothesis are those by analogy, comparative pathology, the study of well-known affections which produce tumor formations, the study of metastases, the local infectivity of the cancerous lesions, and the microscopic appearances of the growths. Tumors in plants are due to parasites as well as tumors that are common in the lower animal. The higher we go in the animal scale the more closely these tumors resemble those of human beings. By a study of the infections which produce tumor formation one of the strongest arguments is set forth. This is not a question of bacteria, but a question of organisms, about which we as yet know very little. In answering the argument against the parasitic theory, that the duration of cancer is too long to permit its recognition as an infectious disease, the facts that cancer is often as rapid as tuberculosis and more rapid than syphilis or leprosy, are given. He claims that Dr. Gaylord had absolutely produced adenosarcoma by inoculation in animals. The organisms of cancer appear to belong to the protozoa. They undergo ameboid movement, but a minute description of these organisms can scarcely yet be given. The most successful way that has yet been devised to cultivate them is to deposit them in collodion sacks in the living animal. He says that if cancer be recognized and be removed thoroughly it can be absolutely cured. If we establish the parasitic cause it is not too much to hope that some agent, be it vegetable or mineral drug, or animal antitoxin, may yet be discovered by which the ravages of the disease may be checked or prevented.

SURGICAL ERA

CHAS. ADAMS, M. D., EDITOR

CHICAGO, OCTOBER, 1901

BLOOD EXAMINATIONS IN SURGERY.

Many earnest workers are now busy with the problem of the value of blood examinations in the diagnosis of surgical affections.

It must be admitted that the results so far obtained are, in many instances, contradictory; but it must be borne in mind that in so large a field of investigation, involving so many complex problems, time is required for the determination and elimination of disturbing factors and the formulation of rules with fewer and fewer exceptions.

All agree that a low percentage of hemoglobin is a positive contra-indication for operative measures except in cases of actual emergency. In all cases of suspected low percentage of hemoglobin, one or more blood examinations should be made before the preparatory treatment for the operation has been instituted. Mikulicz has set 30 per cent as the lowest point at which operations may be performed under a general anesthetic. Da Costa and Kalteyer agree with Hamilton Fish that 50 per cent Hb is a dangerous level, and urge that a general anesthetic must not be given, except under the stress of absolute necessity, when there is less than 40 per cent.

Their observations regarding the effect of ether upon the red cells show that hemoglobin is always reduced absolutely. They conclude that etherization produces increased hemolysis; and in nature's effort to rapidly replace the destroyed corpuscles the regenerated cells are imperfectly supplied with hemoglobin. Bloodgood says: "An anesthetic has great additional dangers when given to patients with the hemoglobin estimate below fifty per cent." Wyeth says: "When a low percentage of hemoglobin is present, it is an indication to avoid any operative shock until the impoverished condition of the blood can be corrected

by proper nourishment, by rest or by medication, when this is positively indicated."

Cabot, Blake and Hubbard have investigated the effects of ether, of operation and of fracture upon the leucocyte count and also the regeneration of the blood after operations for malignant disease. Their conclusions are:

(1) At the end of complete anesthesia, there is occasionally a slight increase of leucocytes, but seldom a marked leucocytosis.

(2) At the end of operation there is a considerable leucocytosis in one-half the cases, and in almost all cases some increase beyond that found at the end of complete anesthesia.

(3) Simple uncomplicated fractures seldom increase the leucocyte count to any extent. (Silhol says his observations lead him to believe that fractures are accompanied by leucocytosis, which is not seen in luxations.)

(4) The blood after operations for malignant growths is not necessarily much impoverished, and regenerates, in favorable cases, quite normally. This last conclusion based upon the examination of thirteen cases is contradictory to the statement of Bierfreund that "after operations for malignant disease the hemoglobin never reaches the point at which it was before operation."

From observations on the variations of the counts in cases of typhoid fever these investigators found that the occurrence of a short "wave" of leucocytosis, believed by some writers to be suggestive of intestinal perforation, is apparent in some cases only when hourly or half-hourly counts were made, and, it appears to them that such a "wave" of leucocytosis may, and probably does, occur in many conditions other than intestinal perforation, and even without any recognizable pathological lesions. They believe it to be unsafe to base any infer-

ence regarding diagnosis and treatment upon such temporary waves of leucocytosis. (Silhol says, "Leucocytosis is of no special diagnostic value in typhoid.")

Bloodgood presents some points of great practical value to the surgeon. He says there is need for much more study on the question of post-operative leucocytosis. "Most authorities agree that following ether there is perhaps a slight increase in the leucocytes, which, however, disappears within twenty-four and at most thirty-six hours." Now, according to Cabot, Blake and Hubbard, there is seldom a marked leucocytosis attributable to ether alone, but, as above stated, at the end of operation there is a considerable leucocytosis in one-half the cases and in all cases some increase beyond that found at the end of complete anesthesia. Schnitzler and Ewald, in their experimental work on the cause of aseptic wound fever, found leucocytosis an almost constant sequel of trauma, either open or subcutaneous. This lasted, however, only a short time, 24-36 hours. Bloodgood says further that one should expect, in the average operation, the leucocytes to be within the normal limits, within twenty-four hours. If this point be thoroughly established — that under a normal course post-anesthetic and post-trauma conditions of the blood disappear within twenty-four hours, leucocytosis occurring after that time has a high value in the diagnosis of post-operative disturbances. In abdominal surgery leucocytosis is most certain in the diagnosis of post operative obstruction." Here there is always a rise, usually over 20,000, associated with any obstruction of the intestines. This rise generally takes place within from eight to twenty hours after the beginning of the obstruction, and, in a few cases observed, the rise in the leucocytes had been prominent before the clinical symptoms themselves were sufficiently clear to make a positive diagnosis. The number of observations so far have demonstrated that when, after laparotomy with general anesthesia, the patient develops slight distention, or even marked distention, with nausea and vomiting, which seems more

or less due to paralysis of the intestines, and not to definite obstruction or peritonitis, the leucocytes do not rise, at least not above 12,000 to 15,000. If these observations are confirmed the counting of the white blood-cells would be a great aid in the differential diagnosis in the first twenty-four to forty-eight hours or later, after laparotomy, between benign abdominal distention and obstruction or peritonitis, for which operative interference would be indicated early.

As regards the importance of the leucocyte-count in the early recognition of abdominal lesions it would seem that, in appendicitis, in most cases at least, the degree of leucocytosis is proportionate to the extent of the pathologic condition; that the leucocytosis observed at or directly after the beginning of the attack in the so-called catarrhal cases decreases with the subsidence of the inflammation; that in cases examined late in the attack the presence of leucocytosis is almost positive evidence of the presence of abscess, even when clinical symptoms have subsided and abdominal examination is negative, also that as rare exceptions to the general rule small localized abscesses may be found in cases which show no marked increase in the white blood-cells. In gangrenous appendicitis as a rule the leucocytosis is higher and rises more rapidly, and according to Bloodgood may be practically the only clinical evidence of a grave abdominal condition. He cites one case in which this is strikingly illustrated. The patient, a boy, suffered from an attack of pain and nausea, and vomiting followed a few hours after taking a good deal of indigestible food. When the stomach relieved itself there was no further pain and no further abdominal symptoms. After 24 hours the leucocytes were 17,000. A leucocytis of 17,000 in a patient a number of hours after taking food would make one suspicious of an inflammatory lesion. In thirty hours the leucocytes were 17,000, and in thirty-six hours 35,000. The highest temperature was 100° F. There were practically no abdominal symptoms except the history of a short attack of colic and vomiting following indigestible

food. Because of this rapid rise and the high leucocyte count (35,000) it was considered safer to explore the abdomen. A gangrenous appendix with beginning purulent pelvic peritonitis was found.

The important diagnostic value of leucocytosis after the subsidence of acute symptoms is illustrated by a case cited by Silhol. The patient, a lad of seventeen, is admitted to hospital with nothing definite ascertainable in the way of history excepting that he had had painful attacks in the right iliac fossa; "the doctor had spoken to him of appendicitis." Examination of the abdomen was absolutely negative, there was no pain or sensitiveness in the right iliac fossa. Examination of the blood showed: Hemoglobin 80 per cent, red cells 4,600,000, white cells 19,200, with a raised proportion of mono-nuclear leucocytes. The leucocytosis determined intervention and there was found an adherent appendix on the point of perforation.

Bloodgood concludes, from his observations, in regard to the interpretation of the leucocyte-count in Appendicitis, that, although there are exceptions to the rule, a rising leucocytosis is an indication for an operation. In the majority of instances, if the leucocytosis reached 18,000 before forty-eight hours, it has been an indication of an advanced pathological lesion. For example, excessive exudate with a diffuse appendicitis, gangrene, or an appendix distended with pus, abscess, or beginning peritonitis. When the leucocytes have been below 18,000, or, when counted a number of times, have fallen in number, the patients have recovered without operation. With a fall in the leucocytes there has been associated a rapid cessation of the local symptoms, or, if operated on, the appendix has been the seat of but slight diffuse inflammation.

Observed later in the attack, especially after the fourth day, a high leucocytosis has usually been associated with localized abscess or beginning peritonitis. Abscess may exist, however, with a low leucocyte count.

It is also to be remembered that with peritonitis there may be a very low leucocyte-count. Observations are suffi-

cient to indicate that in the majority of instances beginning peritonitis is associated with the rise in the leucocytes, which, however, falls as the patient becomes more septic.

"A rapid rise in the leucocytes, especially above 18,000, should, in my opinion, be a sufficient indication for exploration, even in those cases in which the local symptoms are very slight. In the few exceptions in which the local symptoms are sufficiently distinct to indicate an operation a low leucocytosis should not influence us to delay operation."

Referring again to the subject of intestinal obstruction Bloodgood says: "We have a large group of cases which have demonstrated that within twelve hours after the beginning of the obstruction the leucocyte-count may rise to 20,000. Within the first twelve to twenty-four hours a few observations would demonstrate that if the leucocyte-count rises above 25,000 or 30,000, the probabilities are that one will find gangrene of the obstructed loop or beginning peritonitis. If observed on the second or third day after the beginning of the symptoms it is difficult to make a differential diagnosis with regard to gangrene or peritonitis. After the third day, in cases in which there is no gangrene and no peritonitis, or in which the auto-intoxication is not yet very grave, the leucocytes still remain high — 15,000 to 23,000, according to the degree of obstruction — complete, higher; partial, lower. In the presence of gangrene, peritonitis or grave auto-infection, the leucocytes begin to fall. If the patient is admitted after the third or fourth day with a history of intestinal obstruction, and still has a high leucocyte-count, the prognosis is good for operation. If the count is low, and especially if it is below 10,000, the probabilities are that you will find at operation extensive gangrene or peritonitis, or that the patient will be so depressed by the auto-intoxication that reaction does not follow relief of the obstruction."

In Cholecystitis there is leucocytosis of 20,000 to 26,000 early in the attack, subsiding after operation or with the disappearance of the symptoms of inflammation.

It has been claimed by numerous observers that carcinoma of the stomach was indicated by the absence of digestion leucocytosis. This, however, is opposed by observations that have still more recently been reported, to the effect that, in addition to the reduction in the percentage of hemoglobin and in the number of red corpuscles, the colorless corpuscles also, especially the uninuclear, are increased. It has further been said that absence of digestion leucocytosis occurs likewise in cases of chronic gastric catarrh and of gastric ulcer. (Med. Rec.) Silhol, on the basis of ten observed cases, says that in the diagnosis of gastric affections, we may decide on the presence of a neoplasm, if: The hemoglobin be reduced to less than 50 per cent; if the red globules be notably reduced in number; if the red cells are irregular, and, if there be a leucocytosis of at least 15,000 to 20,000. A high proportion of mononuclear leucocytes strengthens the diagnosis. This seems a rather positive conclusion to reach upon only ten observations, but Silhol claims that if all these conditions be present, the diagnosis is certain. As before remarked time is required to establish order out of the present somewhat chaotic mass of evidence.

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Studies of the Blood in Its Relation to Surgical Diagnosis. R. C. Cabot, J. B. Blake and J. C. Hubbard. (Ibid.)

L'examen du Sang en Chirurgie et en Particulier au Point de Vue Diagnostique. J. Silhol (Revue de Chirurgie, 10 Juin, 1901).

The Value of Clinical Microscopy, Bacteriology and Chemistry in Surgical Practice. John A. Wyeth, M. D. (Medical Record, New York, June 8, 1901).

The Diagnosis of Carcinoma of the Stomach. Editorial. (Med. Rec., April 27, 1901.)

In passing a sound, no deviation from the median line can possibly be of service. If the sound cannot be introduced with the aid of patience and gentleness, rough methods will certainly not succeed.

CARCINOMA.

Much energy and ability are now being devoted to the investigation of the origin of carcinoma. The discovery of a germ, be it animal or vegetable, may be the first step in the direction of cure by other means than operation.

Up to the present writing, while several observers are confident that they have isolated a parasite to which carcinoma is due, there is much confusion as to the nature of the germ itself. Until exact demonstration has been made and all tests satisfactorily met we are as much in the dark as ever on the mode of origin of carcinoma. Senn, in the N. Y. Med. Rec., July 13, 1901, in regard to "The Present Status of the Carcinoma Question," states the following:

Propositions. — 1. The most notable contributions to the present status of the carcinoma question are to be found in the investigations which have thrown new light on the origin, growth, segmentation, and manner of local and general dissemination of the carcinoma cell.

2. Carcinoma is a tumor resulting from an atypical proliferation of epithelial cells from a matrix of embryonic cells of congenital or post-natal origin.

3. The law of the legitimate succession of cells holds true in the origin and growth of tumors, both benign and malignant, as well as in the production of normal and inflammatory tissue.

4. As carcinoma always originates from epithelial cells, primary carcinoma in mesoblastic tissue is impossible from a histogenic standpoint, unless a matrix of embryonic epithelial cells has become displaced during the development of the embryo, or embryonic epithelial cells have become buried in mesoblastic tissues after birth, by injury or disease.

5. The histology and histogenesis of carcinoma speak against the parasitic origin of this disease.

6. The stroma of carcinoma consists of pre-existing connective tissue fibers and their descendants.

7. Carcinoma cells usually multiply by irregular, atypical karyokinesis, and this pathological segmentation is an important indication of malignancy, and as such is of considerable diagnostic value.

8. The progressive extension of a tumor to adjacent tissues and organs, regardless of their anatomical structure, is a strong proof of its carcinomatous character.

9. Regional metastasis in carcinoma takes place exclusively through the lymphatic channels, and the pre-existing lymphatic structures take no active part in the origin and growth of the secondary tumors.

10. General dissemination of carcinoma usually takes place by direct implication of veins in the primary or secondary tumors. Carcinoma cells reach the venous circulation through the formation of an intravenous tumor thrombus, through carcinomatous endophlebitis, or, finally, through perforation of the vein wall by isolated carcinoma cells. Retrograde intravenous extension of carcinoma is due to the transportation against the venous current of minute emboli of carcinoma cells surrounded by a mantle of blood corpuscles which move, step by step, upon the intima. Retrograde extension through the lymphatics may take place in the same manner, but there is very little doubt that it is more frequently the result of carcinomatous endolymphangitis.

11. The increase of carcinoma seemingly shown by some recent statistics is more apparent than real.

12. Heredity is a generally recognized potent predisposing cause of carcinoma.

13. As a rule, carcinoma occurs in persons of advanced age, but occasionally is met with in persons less than twenty-five years of age, and in the latter case the disease is characterized clinically by its great malignancy.

14. Carcinoma seldom follows a single injury, but develops more frequently in consequence of repeated injuries or prolonged continuous irritation.

15. Among the predisposing causes of carcinoma must be enumerated racial, climatic, and topographical influences.

16. Chronic inflammatory products, cicatrices, and benign epithelial tumors produce local conditions favorable to the development of carcinoma.

17. The positive results of implantation and inoculation experiments have so far failed in establishing beyond all doubt, upon a bacteriological and histological basis, the parasitic theory of carcinoma.

18. A careful study of the experimental researches and bacteriological and histological investigations concerning the etiology of carcinoma does not at the present time warrant us to claim for this disease a parasitic origin.

19. The experience of centuries and the internal use of innumerable remedies have demonstrated that so far carcinoma has not been materially influenced for the better by this method of treatment.

20. Direct medication of carcinomatous tissue by parenchymatous injections has no influence in retarding or arresting its growth, while the injection of sclerogenic substances into the connective tissue around the border of the tumor appears to restrain the local extension of the disease by impairing the blood supply to the parenchyma of the tumor.

21. Local applications of any kind in the treatment of ulcerating carcinoma must be considered at best only in the light of palliative measures.

22. The actual cautery and chemical caustics have only a limited field of usefulness in the treatment of open inoperable carcinoma. They should never be employed in the treatment of closed carcinoma as a substitute for the knife.

23. The treatment of carcinoma by different sera has, without any exceptions, yielded only negative results.

24. The early and radical operative treatment of carcinoma offers the only prospect for permanently eliminating the disease.

25. The permanency of the results of the operative treatment of carcinoma cannot be determined in less than ten years after the operation.

26. A radical operation for carcinoma should never be attempted unless the local conditions and general health of the patient are such as to promise an equivalent of the immediate and remote risks to life and comfort involved in the operation.

27. Taking it for granted that carcinoma is the product of an erratic, planless cell-growth outside of the range of the physiological influences which preside over and regulate normal growth and tissue repair, it appears logical in the search for curative agencies to make experiments and observations with the view of finding a remedy which would destroy the tumor by causing an early and speedy degeneration of its parenchyma, or which would possess the property of converting embryonic into mature epithelial cells, thus converting a carcinoma into a benign epithelioma.

Sometimes in children who have undergone a tracheotomy and have been compelled to wear the tube a long while, it seems very difficult to get them in the habit of using their larynx again. A nervous dread of being without the tube has much to do with this condition. In such cases the surgeon may try occlusion of the tube with a cork, without removing the instrument, and persevering efforts must be made to get the child to talk, or to blow a cheap trumpet, or to blow out a candle.

The parents of children with hypertrophied tonsils often object to operation because they think the latter may interfere with the child's voice. This fear is groundless. Explain to the parents that the voice will suffer more from the child's continued bad health than from anything else.

In bad cases of burns or other severe and painful injuries it is advantageous to give chloroform for the first dressing, or at least to give a hypodermic injection of morphia. This diminishes the pain and fear, and consequently lessens the shock.

Small boys brought to the surgeon with a very swollen penis nearly always have buried deep in a sulcus, and often invisible excepting by strict search, a ligature of some sort or a ring which must be removed.

BOOKS

TUBERCULOSIS AS A DISEASE OF THE Masses, and How to Combat It. Prize Essay by S. A. Knopf, M. D., New York. Published by M. Flirstack, 200 W. 96th street, New York. 1901.

On the title page of this brochure are the words — "The 'International Congress to Combat Tuberculosis as a Disease of the Masses, which convened at Berlin, May 24 to 27, 1899, awarded the International Prize to this work through its Committee on July 31st, 1900.'"

Here we have in a nutshell, as it were, all the main facts necessary for the people to know regarding the great white scourge. Dr. Knopf has put into concise and clear form the essential facts touching tuberculosis as a disease of the masses and how to combat it.

To enumerate the topics treated of would be to name every one belonging to a consideration of this disease; nothing is omitted. At the present time it is interesting to note the author's views touching bovine tuberculosis. He clearly expresses the belief that it is communicable to man.

We will conclude our remarks by saying that every physician having a case of phthisis to treat, should place Dr. Knopf's "Brochure" in the hands of his patient. It will be a great aid to intelligent co-operation.

ELECTRICITY IN MEDICINE AND SURGERY, Including the X-Ray. By William Harvey King, M. D. Author of the *Journal of Electro-Therapeutics* and Professor of Electro-Therapeutics in the New York Homeopathic Medical College and Hospital. Published by Boericke & Runyon Co., 1901. (Price \$3.50.)

This work is given in two parts, with a section on electro-physiology by W. Y. Cowl, M. D., of Berlin, Germany, and a section on the Bottini operation by Albert Freudenberg, M. D., of the same place. The first section in part one treats of electro-physics. It is well composed and sufficiently well illustrated to give the student a comprehensive knowledge

of the elements of electricity, which is very essential to a proper understanding of that which follows. Following this is a short history of the X-ray and its uses; the tube and the cathodic ray; the nature of the X-ray; the electric energy necessary to excite the tube, and its source; the fluoroscope and its uses; the skio-graph and directions for taking the developing plate; the X-ray burn and its treatment, and the medical use of the X-ray. The section on the motor points is well illustrated, and following this electro-diagnosis is made very plain. The last section in part one is devoted to organic-electrology, setting forth the most advanced thought in electro-physiology.

Part two treats of general electro-therapeutics. How electricity should be used in treating diseases of the nervous system; gynecology and obstetrics; diseases of the alimentary tract; genito-urinary system; and especially the treatment of hypertrophy of the prostate gland by the galvano-caustic method, after Bottini; diseases of the nose and throat and diseases of the skin. Part two winds up with a section on the treatment of general diseases and diseases not otherwise classified.

This is a most excellent work which we can heartily recommend to student and practitioner. Dr. King does not overestimate the value of electricity in medicine and surgery. In a very conservative manner he gives that which much study and experience has taught him may actually be accomplished with this agency. The book contains 504 pages with plain print on good paper. It is up-to-date and a splendid book, in which the author and publishers may take great satisfaction.

"The Medical Magazine" is the latest addition to Homeopathic periodical literature. The editor is Dr. Harvey B. Dale, with Dr. Filip A. Forsbeck as associate. It comes from Milwaukee. It is well for the Wisconsin profession to have an "organ."

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The eighth annual meeting of the Missouri Valley Homeopathic Medical Association will be held in the Paxton Hotel, Omaha, October 23-24, 1901.

Lewis P. Crutcher, M. D., Secy.,
312 Shukert Bldg., Kansas City, Mo.

Messrs. Boericke & Tafel have opened another pharmacy in New York City, in the "up town" district, at 634 Columbus Ave., near 91st St., being the third pharmacy in New York City for this progressive house, and their tenth in the United States.

OBITUARY.

DIED. — Dr. Jessie Shepard died at Buffalo, N. Y., August 24th, 1901.

Dr. Shepard graduated from the Boston University Medical School in 1888. She served as House-Surgeon for one year in the Massachusetts Homeopathic Hospital; later she practiced in Buffalo for several years in business association with Dr. Joseph T. Cook. Recently she spent a year at the General Hospital, Vienna.



That the modern girl limps after being vaccinated.

That you should do others before others do you.

That any man can get up in the world who will step into an elevator.

That the first thing a man does when he raises the wind is to blow about it.

That a man keeps quiet when he ought to talk, and a woman talks when she ought to keep quiet.

That when a patient says she never closed her eyes during the night, don't contradict; just close one of your own eyes.

That reformers would do better if they would spend less time in trying to reform others, and more in reforming themselves.

That the rich man is thankful if he has a good digestion and the poor man is thankful if he has something good to digest.

That some conscientious scruples are all profit.

That it is generally the better half who gets the worse half.

That you should never trouble trouble until trouble troubles you.

That when we care we don't dare, and when we dare we don't care.

That for every fault you discover in your neighbor you overlook two in yourself.

That when a man gets what he wants he generally finds that it isn't just the thing he wanted.

That many people know what they would do under certain circumstances, but the circumstances seldom shape themselves to suit.

That if women knew themselves as well as men think they know them, and if men knew women as well as women know themselves — the world would be in pretty much the state that it is now.

MEDICAL ERA

CH. GATCHELL, M. D., EDITOR

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HYDROTHERAPY IN THE TREATMENT OF TYPHOID.

This is the season of typhoid. From cities in all parts of the country come reports that the epidemic is more general than usual.

There is no disease to which attention to a greater number of different symptoms must be given than is required in typhoid. In some cases the force of the disease seems to be expended on one part of the system, while in others another part or organ will be the chief point of attack. In one case the most violent symptoms may belong to the gastro-enteric sphere; in another, to the lungs; in another, to the brain and nervous system. According to these various forms varied treatment is demanded in order to meet the local conditions; but in all forms of the disease there is one condition which is paramount and must be met in every case — this is the fever. High temperature creates rapid degeneration of the cells of all parts and organs, and is attended by severity of all symptoms. The cases, as a rule, do best which pursue their course attended by moderate temperature; therefore, any mode of treatment which serves to allay fever, conserves the strength of the patient and adds to the chances of recovery and of early convalescence.

In the accomplishment of the desired result, that is, reduction of the temperature, thus allaying feverish action, there is no method of treatment so salutary or so effectual as the proper application of hydrotherapeutics. The physician who treats his cases of typhoid without making use of this method deprives himself of the best that medical practice has to offer, and fails to do full justice to his patient. The application of hydrotherapeutic treatment is simple and yet it must be well understood and carried out sys-

tematically. It consists of cold spongings, of wet-sheet packs, and the use of the ice-cap.

The cold sponging should be begun early in the disease, with the first rise of temperature, whenever this reaches 102 degrees or over. Use for the purpose equal parts of water and alcohol at a temperature of 50 degrees to 60 degrees F. In sponging the patient expose but one limb at a time, and sponge it off for several minutes; then cover this part, and so, in succession, sponge the extremities and afterwards the body, but — as before — only one part at a time. The back especially becomes heated from lying upon it, and should receive a thorough sponging. The entire process, covering all parts of the body, should occupy but about fifteen minutes. The sponging should be repeated every two hours if the patient's temperature goes above 102.5 F. If the temperature is below this point the interval may be made longer — three or four hours. If the head is hot an ice-bag should be kept applied to it.

If the cold sponging is without effect because of hyperpyrexia, then resort may be had to the wet-sheet pack. In order to make use of this method a sheet wrung out of cold water is spread upon a bed on top of several open blankets. The patient, with all clothing removed, is lifted and placed in the middle of the sheet and quickly the sides of the sheet are drawn over him and closely tucked about the body and limbs. A slight shock attends this sudden application of cold to the surface, but it never results in any harm. The sheet is folded about the patient, the blankets are drawn over him and in this way he is enclosed in a "pack." Now apply an ice-bag or cold cloths to the head. Let the patient remain in the pack until the sheet becomes warm and perspiration starts; then take him out and place

him in a fresh bed and dry the entire body with several towels. This method of treatment reduces the temperature, quiets a restless patient, and moderates all nervous symptoms. No case of typhoid should be treated without resorting to it. It is vastly superior to the Brand method of treatment by cold baths. It tones the heart and often induces refreshing sleep. The Brand method is applicable to some cases, but in others it will do harm. Its application requires careful discrimination. On the other hand, the method by cold sponging and cold wet-pack may be used in all cases with benefit.

The matter of diet in typhoid is one of perennial interest. Occasionally there is some one who makes a bold departure from old established methods, but those most experienced have settled down to the belief that there is nothing better than milk for patients of this class. The form in which the milk is given may be varied, and, in fact, calls for a variety of forms. The form that agrees with one patient does not suit another. Some can digest it when taken raw, while in other cases it must be boiled or diluted either with water, seltzer, lime-water, or other diluent. Milk in other forms, such as kumyss, matzoon, or butter-milk, may be substituted. If the milk that is given disagrees, do not abandon it for other kinds of food, but change the form in which the milk is given. A plentiful quantity of pure water to slake thirst should be given in all cases.

What we have here stated is familiar to the experienced practitioner, but the young physician with his earliest cases will proceed with greater confidence if given the benefit of repeated precept.

A communication from Algeria states that a careful watch was kept for the first appearance of anopheles, to determine if it coincided with the first cases of malaria. The mosquitoes began to arrive June 15, and between June 26 and July 10 seven soldiers, who had arrived during the winter, were received at the hospital affected with malarial fever, the first malarial patients of the year.

ORIGINAL ARTICLES

BRONCHITIS.

BY CH. GATCHELL, M. D., CHICAGO.

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Definition.

Catarrhal inflammation of the mucous membrane of the bronchial tubes; the chief symptoms are cough, expectoration and difficult breathing.

- (1) Acute bronchitis: (a) Of the larger tubes; (b) of the smaller tubes.
- (2) Chronic bronchitis.
- (3) Plastic bronchitis.

BRONCHITIS OF THE LARGER TUBES. ETIOLOGY.

Predisposing Causes.

Heredity.—In some instances there is an inherited tendency to inflammation of the respiratory mucous membrane.

Age.—Those of all ages are subject to bronchitis, though it is most common at the extremes of life.

Occupation.—Persons confined in an impure air or air laden with irritating substances are especially liable to these attacks.

Climate.—It is most common in cold and damp climates.

Season.—It prevails most in the winter and spring.

Constitution.—The cachectic and debilitated are especially liable.

Previous attacks.—Those who have already suffered from bronchitis are liable to repeated attacks.

Other diseases.—Subjects of Bright's disease, tuberculosis, rachitis, as well as other pulmonary affections, are especially liable to attacks of bronchitis.

Exciting Causes.

Cold.—Exposure to cold or chilling the body by cold and damp are the most common exciting causes.

Acute diseases.—Bronchitis is a common accompaniment of the acute infectious diseases; more especially measles, influenza, whooping-cough and enteric fever.

Irritants.—Irritating dusts and vapors act as excitants.

PATHOLOGY.

Catarrhal Inflammation.

There is primary paralysis of the blood-vessels, with congestion of the mucous membrane, accompanied by exudation of serous fluid, mucus, the escape of leucocytes, cloudy swelling and degeneration of the epithelial cells and mucous glands; the mucous membrane is infiltrated with round cells. The inflammation may extend to the peribronchial tissue.

MORBID ANATOMY.

Blood-vessels.—The first change is hyperemia.

Firous coat.—It becomes swollen, relaxed, and infiltrated with lymph cells.

Basement membrane.—It becomes edematous, and wavy and folded in appearance.

Columnar epithelium.—The cells become swollen, loosened, and are thrown off in patches, leaving the basement membrane bare in spots. New cells of transitional form are produced and cast off.

Muscular coat.—It becomes edematous and infiltrated.

Mucous glands.—The cells desquamate, and there is abundant secretion and discharge of mucus.

The tubes.—The lumen becomes narrowed from swelling of the lining membrane and the presence of secretion; the smaller tubes become occluded.

Glands.—The bronchial glands become swollen and hyperemic.

Secondary Changes.

Pulmonary.—There is general hyperemia and edema. Some areas of emphysema; others of atelectasis; and some of broncho-pneumonia.

Cardiac.—The right heart suffers from distention; after repeated attacks there may be permanent dilatation.

POST MORTEM APPEARANCE.

Lungs.

The lungs are large and heavy. Areas of collapse are deep purple in color. The bronchial mucous membrane is swollen and velvety. The large tubes contain muco-purulent secretion. The posterior parts of the lungs are almost solid from collapse, edema and congestion. From a cut surface frothy, watery fluid pours on

pressure. Emphysema is present especially along the borders.

Heart.

The right cavities are dilated and filled with blood. If an acute attack follows repeated attacks, there is usually hypertrophy of the right ventricle. There is dilatation of the vena cava.

SYMPTOMS.

Onset.

In some cases the attack is ushered in by a sense of chilliness; rarely by a distinct chill. This is followed by aching pains in various parts of the body and succeeded by the characteristic symptoms of the disease. In other cases the initial symptoms will be an ordinary nasal or laryngeal catarrh.

Fever.

The temperature is usually moderate—ranging in the ordinary attack from 100 degrees to 102 degrees F.

Cough.

The early cough is short, dry and hacking, occurring sometimes in severe paroxysms; soon, however, the cough becomes moist and is accompanied by expectoration.

Pain and Sensation.

There is seldom sharp pain in the chest. There is usually a sensation of rawness behind the sternum and a sensation of tightness and oppression of the chest.

Expectoration.

Early, the sputum is a scanty, viscid, tenacious mucus; it is expelled with difficulty. Later, it is less viscid and becomes whitish or frothy and the cough "loosens." The sputum may be slightly blood-streaked. Still later, it becomes muco-purulent and of an opaque yellowish or greenish color, and is expelled in masses. The quantity, when free, may be six to eight ounces in the 24 hours. The sputum consists of mucus, serum, small oil globules, epithelial cells, leucocytes, various bacteria, and sometimes a small quantity of blood.

Head.

Early, there is usually headache; later, there may be drowsiness or apathy.

Skin.

In the early days it is usually dry; later, there is free perspiration.

Pulse.

The pulse rate is usually out of proportion to the temperature.

Respiration.

The rapidity of respiration and the degree of dyspnea are proportional to the size of the tubes involved; when only the large or medium tubes are affected, dyspnea is not great; following a paroxysm of cough or unusual exertion the respirations are quickened. If the temperature is high, the number of respirations to the minute is increased as an effect of the circulating blood producing increased activity in the respiratory center.

PHYSICAL SIGNS.**Inspection.**

Beyond increased frequency of respiration and moisture or dryness of the skin, little is revealed by inspection.

Palpation.

This confirms the signs noted on inspection; when the amount of secretion is great bronchial fremitus may be felt.

Percussion.

The note may be little changed. If there is accompanying emphysema it will be hyper-resonant; at the bases and at the back there is dullness if there is congestion or edema.

Auscultation.

Early, the breath-sounds are harsh and exaggerated, especially over the upper portions of the chest. There is prolonged expiration. Later, when there is secretion, the characteristic sounds are sibilant, sonorous rales with, still later, fine and coarse moist rales. Over areas of atelectasis breath-sounds will be absent; also over areas of bronchial obstruction. Fine, crackling rales, especially at the base or in the back, indicate congestion or edema.

DIFFERENTIAL DIAGNOSIS.**Tuberculosis.**

In tuberculosis the fine, crackling rales are heard in the apex and usually on one

side, the temperature is high and there is great prostration.

Pulmonary Edema.

In this condition the rales are always moist, inclined to be uniform in size, and early confined to dependent portions of the lung.

Bronchial Asthma.

The rales are dry, squeaking and groaning, and chiefly expiratory.

Broncho-Pneumonia.

The dyspnea is excessive, all the symptoms more severe, and there are signs of cyanosis.

Complications.

Especially after repeated attacks there may be emphysema, asthma, and dilatation of the right heart. The attack may be accompanied or followed by capillary bronchitis or broncho-pneumonia.

Course and Duration.

In simple bronchitis, uncomplicated, the disease runs a mild course; it is not self-limited; according to the constitutional condition of the patient or the presence or absence of complications, it will vary in wide limits. Relapses are not uncommon. After repeated attacks it is inclined to become chronic. The presence of Bright's disease, cardiac dilatation, emphysema or other pre-existing pulmonary affections renders it more persistent and protracted.

PROGNOSIS.**Favorable Signs.**

In a primary attack occurring in a previously healthy subject, the prognosis is always favorable. When uncomplicated, bronchitis of the larger tubes never threatens life.

Unfavorable Signs.

Conditions which may render the prognosis unfavorable, are the presence of complications affecting especially the lungs and heart. There is slow recovery if emphysema is present. Over-distention of the right heart is unfavorable; also frequent, irregular and intermittent pulse. Bronchitis secondary to measles, influenza and whooping-cough is especially persistent.

TREATMENT.

General Measures.

Sick room.—The room should be well ventilated. The temperature should be kept at about 70 degrees K. Keep the air moist by means of a steam generator of some kind, or a pan of hot water set on stove or register. Do not overdo in this respect; i. e., do not keep the room too warm or the air too moist. If the air becomes close, cover the patient well and ventilate freely at intervals, keeping the temperature maintained at 70 degrees.

Fomentations.—In the early stage if there is much hyperemia of the mucous membrane and a feeling of oppression of the chest, hot applications to the chest will give relief. This may take the form of a hot linseed poultice or of a hot fomentation. A poultice should be lightly made, properly applied, and changed every two hours. The use of poultices in affections of the chest is worse than useless if not properly done. In applying or changing poultices or fomentations do not let the chest get chilled by exposure to the air, and never put on a poultice that will drip. After the pulmonary secretions have become loosened a dry cotton jacket is preferable to fomentation or poultice.

The patient.—Change the position of the patient at intervals from one side to the other. Do not let the patient lie constantly on his back. If there is much secretion difficult to raise, place the patient with the shoulders low and the hips and lower part of the body elevated, so that gravity will favor a removal of the secretion on cough. A patient who is not too ill to do so can lean over the side of the bed — his arms supported on a low chair — in order to accomplish this; it will greatly favor expectoration.

Diet.—Early, during the fever, the diet should be chiefly liquid, such as clear soup, chicken-broth, hot milk gruels, and the like. To allay thirst, give barley-water flavored with lemon. For feeble patients in spells of exhaustion, hot milk with a little alcoholic stimulant is allowable.

Bowels.—Give daily attention to the bowels. Do not permit an accumulation. Use enemata of water or of glycerin.

THERAPEUTICS.

Ferrum phos. (2x)

The sputum may be blood-streaked. There are symptoms of engorgement, but without restlessness and irritability.

HYOSCYAMUS. (tr.)—

A dry cough, worse at night and when lying down. Extreme sensibility of the larynx and trachea.

RUMEX. (1x)—

Cough is excited by inhaling cold air, and also by pressure over the trachea, or by air striking the neck or chest.

LACHESIS. (6x)—

Extreme sensitiveness of the bronchial mucous membrane and of the neck externally.

ANTIMONIUM IODID. (2x)—

Abundant muco-purulent expectoration. Coarse mucous rales in the chest.

HEPAR SULPH. (2x)—

Long paroxysms of loose cough with muco-purulent expectoration.

DROSER. (tr.)—

Loud, hoarse cough in hard paroxysms.

PULSATILLA. (3x)—

Loose yellowish expectoration. Paroxysms of cough, exciting effort at vomiting, with sore pain in the chest. Sensation of dryness in the larynx and trachea. Cough excited by inspiration. Worse at night.

ARSENICUM. (6x)—

High fever, dyspnea, anxiety, tendency to asphyxia.

ACONITE. (1x)—

This applicable only in the early stage; after the disease is once established, it is of no use. Indications:—Fever; dry, hot skin, restlessness and thirst; short, hard, tickling cough, with constant laryngeal irritation; dryness of the mucous membranes.

BRYONIA. (1x)—

Catarrhal inflammation of the mucous membrane of the trachea and larger bronchi; it is of no use when the smaller bronchi are invaded. Indications:—Dry cough, with stitches in the chest; short, labored respiration; feeling of oppression of the chest; with the cough determina-

tion of blood to the head, with headache, and great turgescence of the face.

BELLADONNA. (2x)—

When bronchitis sets in with violent fever, and intense congestion of the lungs, Belladonna will do more to control it than Aconite will. Indications:—Spasmodic cough, in short paroxysms; violent cough, worse at night; no expectoration, or tenacious, blood-sensation of fullness in the chest.

IPECAC. (3x)—

Especially for the bronchial catarrh of children. Indications:—Asthmatic breathing; much nausea and vomiting of mucus; rattling of mucus in the bronchial tubes; face livid during cough; loud, mucous rales, with wheezing respiration; severe gastric ailments and intestinal catarrh; pallid or bluish or bloated countenance.

KALI BICH. (3x)—

Cough, with expectoration of tough mucus, that can be drawn out in strings; thick coating on the tongue; loathing of food; burning pain in the trachea. For bronchorrhea, with abundant purulent expectoration, give Kali bi., 2 grains in 4 ounces of water, by inhalation, in steam atomizer.

TARTAR-EMET. (2x)—

The chief indication for Tartar emetic is profuse secretion of mucus in the bronchial tubes, which is difficult to raise. Indications:—Great oppression and suffocative breathing; extensive mucous rales; great rattling of mucus with the cough, but nothing is raised; also symptoms of incipient carbonic acid poisoning — sopor, delirium, pallor, bloated countenance; also, profuse sweat without relief; disposition to vomiting and diarrhea; paroxysms of rattling cough, ending in vomiting. For capillary bronchitis of children, and pneumonia notha of the aged.

ANTIMONIUM ARS. (2x)—

Abundant secretion of mucus; with loud rales; difficult breathing; skin cyanotic, with cool perspiration; the patient anxious and restless.

VERATRUM ALBUM (1x)—

Especially in the later stages of capillary bronchitis of children, with fail-

ing strength; pulse rapid and irregular; abundant secretion of mucus, which the child is unable to raise; cold, moist skin.

BROMINE. (2x)—

Acute bronchitis, with catarrhal inflammation of the larynx and trachea, with hoarse, croupy cough; the patient is weak and perspiring; the cough is tight, hard and spasmodic. It is the spasmodic cough that is characteristic; it is attended by suffocative attacks, and rattling of mucus in the larynx.

AMMONIUM CARB.—

In capillary bronchitis of children, or in the bronchitis of the aged, Ammonium carb. is called for when there is marked failure of the respiratory or circulatory functions. Indications:—Accumulation of mucus in the bronchi, which it is difficult to raise; great oppression of the chest; loud, coarse rales; great prostration, with falling temperature. Dose:—It must be given low; put grs. x of Ammon. carb. in one-half glass water; give teaspoonful dose every 15 to 30 minutes.

Fibrinous Bronchitis.

French reports and illustrates a case occurring in his own practice and reviews the etiology — which is not so characteristic — pathology, symptoms, prognosis and treatment of the condition. He considers the prognosis always grave, especially in the extremes of life, and much more serious when it occurs in the course of other affections than in the presence of fair health. He uses carbonate of creosote, in which he thinks he is the pioneer. He was led to use this by his observation of its action on bronchial secretion in other affections and also by the suspicion that tuberculosis might be present in the case. Improvement began immediately after its administration, and while a single case does not demonstrate much and the dose was small, he mentions it as being of some possible value.

The oldest living human being is Bruno Cotrim, living in Rio de Janeiro, 150 years old.

LEAD POISONING.

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(Sub-clinic in Cook County Hospital,
stenographically reported.)

The case which I here present is one of lead poisoning. The patient is a foreigner and we cannot understand what he says, so we cannot get a perfect history.

The present illness began three weeks ago with loss of appetite, sluggishness of the bowels and intermittent griping pain across the abdomen. He also complains of dyspnea on slight exertion. Up to this time his strength has diminished considerably. He has no headache, no pain in the chest, no cough, no pain in the back, no vertigo, no unusual urination, no pain in the limbs or any other part of body except the abdomen. He has vomited three times within the last week.

The patient has been working in a paint factory, where he was employed mixing dry paints. Habits: negative. Family history: negative. Occupation previous to working in the factory, was doing heavy labor, handling stone.

Examination.

Upon inspection we find a patient only slightly emaciated. The skin is chlorotic in appearance. The apex-beat is in the 5th interspace, just inside the mamillary line. The area of contact is very much enlarged. The left ventricle is apparently striking the chest above and beyond the apex. The 2nd, 3rd, 4th and 5th interspaces contract along the sternum with each systole of the heart.

Palpation reveals a slight diastolic shock over the precordial area. The apex-beat is slow and heaving in character, with a pronounced, quick, sharp contact with the chest above and beyond the apex; flapping in character. Examination of the lungs, negative. Cardiac area on percussion, not enlarged to the right or downward. The apex-beat is in the 5th interspace in the mammillary line; the upper line of dullness extends along the 3rd rib to one inch above the nipple; then to the apex. The apex is apparently

drawn around to the right and fastened by adhesions; the ventricle strikes the chest above and beyond.

Auscultation.

Over the aortic area there is a systolic murmur pronounced in character transmitted to the neck, to the femoral arteries and extremities. Over the aortic area, also, there is a diastolic murmur soft and blowing in character—not harsh as the systolic murmur, but transmitted to the apex and slightly to the left; also transmitted down the sternum. The patient has the characteristic Corrigan pulse, and capillary pulsation. The absolute liver dullness only reaches between the 6th and 8th ribs. There is no enlargement of the spleen. Abdomen negative. Complete analysis of the urine was not made, but there is no albumen, no sugar or casts.

On examination of the mouth, we find a blue line around the gums next to the teeth — characteristic of lead poisoning. Reflexes all normal.

Blood analysis shows red cells 4,200,000; hemoglobin, 65 per cent; white cells, 7,800.

From the history this is evidently a case of acute lead poisoning. It is complicated with heart lesion, which was contracted previous to this illness. The heart lesion consists of pericardial adhesions fixing the apex, causing the hypertrophy of the heart to extend above, and also causing the contraction of the intercostal spaces during systole. There is no enlargement of the heart to the right or downward.

The lesions of the aortic valves are those which are produced by his occupation. There has evidently been no endocarditis, but the change in the valves is due to valvulitis caused by the constant lifting and exertion of his labor, as there is no sign of arterial sclerosis, arthritis, specific disease or rheumatism.

The lead poisoning in this case is subacute in character, exhibiting the characteristic blue line around the gums, with the lead colic and constipation. Lead poisoning attacks all ages alike, but women are apparently about four times as susceptible as men under the same conditions.

Etiology.

From the observation of English authorities, people with gouty inheritance are most susceptible to lead poisoning, but it is not apparent that a person suffering with gout is particularly so.

The sources of lead poisoning can be divided into two classes — industrial and accidental. In the industrial class come workers in lead in any form — such as painters, plumbers, dyers, etc. The carbonate of lead is the form in which it is most frequently taken or absorbed. Next, perhaps, we would place the chromate of lead, which affects dyers and people using color-material; also occasionally, it is found in coloring foods, such as butter and candy.

The accidental forms of lead poisoning arise from water which has been kept in lead retainers or passed through lead pipes; by the adulteration of foods; cosmetics, hair-dyes, etc. The nature of the water passing through the pipe has much to do with the amount of lead that is carried in solution to the drinker. Organic matter in the water makes it dangerous, as it is likely to decompose, forming certain organic acids which removes the mineral matter deposited on the inside of the pipe, which serves as a natural protection, permitting the lead to be taken into solution.

The absorption of lead is almost entirely through the alimentary canal. Little can be taken through the skin; and cases are recorded where the supposed poison was due to particles taken in the respiratory tract. The impunity with which lead ointments may be used on the skin is a fair demonstration that it cannot be absorbed in quantities sufficient to poison through the skin.

The lead taken into the system is deposited in nearly all the various organs — especially the liver, kidneys and nerve tissue; the different cases varying as to its chief deposition; some cases having more lead in one organ than in another. Lead is chiefly eliminated with the urine; some is taken out with the bile and saliva.

The symptoms of lead poisoning are 1st, Anemia, the pallor of which resembles that of chlorosis. Hayem states that

the anemia of chronic lead poisoning is characterized by its resemblance to chlorosis.

The general nutrition is usually diminished, according to the gravity of the case or intensity of the poison. Pyrexia is not usually present. Cases have been recorded with marked temperature. The bluish line on the gums is a diagnostic symptom of lead poisoning which is due to the sulphide of lead deposited in the tissues.

In some cases we also have bluish spots on the mucous membrane of the mouth — of various shapes and sizes — due to the same salt of lead.

Gastro-Intestinal Symptoms.

Lead colic is a characteristic, typical disturbance of lead-poisoning. It consists of paroxysmal abdominal pain referred to the region of the umbilicus. The pain is usually very intense in character, and varies in duration from a few minutes to several hours. The relief between the attacks may be complete, or the patient may complain of a heavy, dull pain continuously. During these attacks there is usually vomiting. The abdomen is contracted and obstinate constipation accompanies this condition.

During the attack of colic the arterial tension is always increased; the aortic second sound is accentuated. At the beginning of the poison these symptoms subside with the remission of the colic, but in cases of long standing the arterial tension may become permanently increased and the heart hypertrophied. There is a change in the arteries, which is a form of arterio-sclerosis. The kidney usually becomes involved, and we have either a pure interstitial nephritis or an interstitial nephritis with parenchymatous degeneration.

The nervous symptoms are those of peripheral and central disturbance. The manifestation is a characteristic wrist-drop, caused by involvement of the musculo-spiral nerve. The peculiar involvement of this nerve is characteristic, and it attacks certain muscles in preference to others supplied by this nerve — the triceps, supinator longus, the extensors of the metacarpal bone of the thumb usually being included. However, the muscles of

the upper arm may be involved instead of the ones named, and the deltoid and biceps suffer.

Wrist-drop usually develops slowly, beginning in the index finger, it progresses until the whole hand is involved. The peroneal nerve are occasionally involved, as well as the musculo-spiral. The involvement of the central nervous system is manifested by coma, convulsions, delirium, hemiplegia, hysteria, insanity, etc.

The pathology of lead poisoning, the wasted muscles, show only true primary degeneration or atrophy; there is no fatty or pigmentary change. The vessels in the muscles are usually in a state of arterio-sclerosis. In the nerve trunks, we may find various white patches resembling those of disseminated sclerosis; while in the nerve endings the degeneration is of the Wallerian type. In the liver we find atrophy of the hepatic cells, with an increase of the connective-tissue, which results in a form of sclerosis resembling syphilitic sclerosis.

The prognosis in lead poisoning is usually favorable. The unfavorable signs are: Recurring attacks, mental symptoms of any kind, especially coma.

In this particular case before us we have to deal not only with the lead poisoning but with heart lesion as well. Considering the lead poisoning alone in this case, we would consider the prognosis exceedingly favorable, as there is no disturbance of reflexes, no peripheral nerve changes, and the poisoning is recent; but the lead poison has a direct influence upon the condition of his heart, which condition preceded the lead poisoning.

From the physical signs previously enumerated he has had an adhesive inflammatory pericarditis, which is manifested now by the fixation of the apex-beat; the position of the apex not being changed by posture or deep respiration; also the systolic depressions of the interspaces and the diastolic shock.

The lesion in the aortic valves, of course, is a most serious one, and it is necessary to determine the character of

this lesion, whether progressive or not, in order to make an intelligent prognosis. If it is one of degenerative change or due to mechanical causes, endocarditis or valvulitis. If the change in the aortic valves is due to the degeneration, we should have some evidence of arterio-sclerosis, syphilis, fatty change or arthritis; none of which are present. It would be a rare thing to have an involvement of the aortic valves in an endocarditis with no involvement of the mitral valves, but considering his occupation it is reasonable to determine that the change in the valves is due to a local valvulitis caused by heavy work, increasing strain on the valves until from chronic inflammation they have become imperfect, causing the systolic sound and also the diastolic sound of insufficiency.

Upon the present examination, we have a transmission of the aortic sound to the arteries of the neck, nearly normal in force, and the amount of hypertrophy is not excessive. Were it not for the pericarditis, compensation in the heart would not likely be disturbed as long as the patient was reasonably careful in his habits and work.

It is too early to determine what damage will be done by the lead-poisoning that has occurred. Taking the case as a whole, the prognosis must necessarily be guarded.

Treatment. Dr. Farnsworth has already given the proper prescription for treatment, which is Potassium-iodide, 5 grains at a dose three times a day; but as this is a case of recent and acute poisoning, and as the lead is mostly excreted by the kidneys, we will also give him colonic flushings followed by normal salt solution; one pint — to be retained — every four hours.

July 5th, 1901. The patient since the clinic has improved very rapidly; the lead colic has ceased; the blue line disappeared from the gums, and it is evident that the lead-poisoning has done no permanent damage, and the prognosis is more favorable.

100 STATE STREET.

(From the New England Medical Gazette.)
SOME THROAT SYMPTOMS OF LACHESIS.

MAURICE W. TURNER, M. D.

The throat symptoms of Lachesis may be divided into two groups.

The first includes the characteristic symptoms, i. e., those which differentiate this remedy from others; and also some general symptoms applicable to the part. It consists of nine more or less complete symptoms, which are as follows:

1. Throat and neck sensitive to slightest touch or external pressure; it may cause nausea.

Everything about the throat distresses, even the weight of the bed clothes.

If in the evening on lying down anything touches the throat or the larynx, it seems as though he would suffocate and the pain is much increased.

2. Difficulty of swallowing of saliva, not food; of liquids more than solids, they escape through the nose.

With spasmodic stricture, on swallowing solids there is a struggling and the food "goes the wrong way," gagging follows.

3. Feeling of a lump in the throat; sometimes painful; suffocative sensation; must swallow often; on swallowing the lump descends but returns at once. It feels as if it could be brought up, but it will not come. May wake from sleep distressed and unhappy with this sensation of choking; must have the whole neck bare.

4. Tendency to affect the left side either alone or to begin on the left and extend to the right.

This is the common feature, but the reverse may be true, i. e., the right side first involved with extension to the left, where it remains fixed.

This does not contra-indicate Lachesis.

5. Recumbent posture often impossible.

6. Aggravation after sleep; or the aggravation wakes him from sleep; i. e., sleeps into the aggravation.

This is spoken of as the morning aggravation of Lachesis when it comes on waking in the morning, more properly it is the aggravation after sleep.

Often, especially in the severer cases, the patient feels the aggravation immediately on going to sleep and it arouses him.

7. Aggravation from hot drinks.

8. Pain in the throat, extending to the ears; desire to swallow; aggravation on deglutition; pharynx swollen, dark red. Swallowing increases the pain in the ears or sends the pain into the ears.

9. Throat and larynx painful on bending the head backward.

The second group is made up of the concomitants. In it are to be placed the various sensations which are non-characteristic; they simply round out the case. They are important but less so than those in the first group, which they often elaborate.

These symptoms should be taken into account and covered by the remedy; but as they vary within rather wide limits, it is evident that for the purpose of selecting the remedy or discriminating between it and others they are useless.

A few examples will illustrate:

Constant tickling in throat.

Fullness and soreness in throat.

Spasmodic contraction of esophagus.

Sensation of dryness in throat with inclination to swallow.

Pain in small spot in throat at one side of larynx, somewhat posteriorly.

Burning sensation of swelling; dryness in throat.

To return to the first group. This combination of symptoms is unique. The separate symptoms are found under various medicines, often two or three, and occasionally four occur together, never the whole nine.

From this group of nine symptoms twenty-three or more remedies, my list is not complete, which cover a wide range of disease, must be differentiated.

They are, agar., amyl-n., apis, asaf., bell., bry., cact., chel., cocc., crot-t., elaps., ign., kali-bi., kali-c., lyc., mosch., naja, nat-m., nux-v., phyt., sej., stram., sul.

I will speak only of eight; of some of them very briefly, and take them partly alphabetically and partly in groups.

With apis and belladonna there is more soreness or tenderness of the throat

which makes touch or pressure intolerable; not the nervous uneasiness from pressure about the neck so characteristic of Lachesis.

Both are predominantly worse from swallowing liquids; Lachesis also worse when swallowing saliva.

We may take as a group the serpent poisons, of which perhaps *crotalus horridus* is the most intense (except possibly *cenchris cartotrix*).

They as a class have certain peculiarities, which are well illustrated under Lachesis, and *crotalus* comes nearer to Lachesis than any one of the group or any other medicine; so much so that it is no wonder that those who question the reliability of the Lachesis preparations prefer to substitute it for Lachesis. Still, in the provings we have, its symptoms are not identical with those of Lachesis.

It has the sensitiveness to touch and pressure of the clothes; the dysphagia; lump sensation (*globus hystericus*); left sided tendency and the aggravation after sleep, all like Lachesis.

It does not have the aggravation at the beginning of sleep, which is often marked with Lachesis, neither has it developed the other symptoms of the first group — the aggravation lying down, from hot drinks, bending head back (in diphtheria it rather has a desire to throw the head up and back), and pain extending to the ears. This ought to be sufficient to enable us to decide between them.

We know that *crotalus* is useful in severer conditions than Lachesis, if that be possible, but we cannot say that it is only serviceable then. Milder states and nervous diseases may be helped by it, and then the decision between *crotalus* and Lachesis is likely to be difficult.

Elaps corallinus has some of the throat symptoms of Lachesis; especially the aggravation from touch, great sensitiveness, and from swallowing liquids and solids, not saliva. Besides this, it has the left sided tendency with the pain extending to the ears on deglutition.

Naja tripudians shows even less similarity, though it has an affinity for the left side of the throat.

Diphtheria with symptoms in many ways like Lachesis; with extension to the

larynx and impending heart paralysis; or threatened paralysis of the heart after diphtheria.

The laryngeal and cardiac involvement being the essential things.

The throat symptoms of *lycopodium* do not run so close to those of Lachesis as we are usually led to think.

The sensitiveness to touch and pressure is very slight, though the throat may be extremely sore inside. The sensitiveness to pressure of the clothes under *lycopodium* is over the epigastrium and abdomen, not about the neck.

Next the difficulty of swallowing is especially marked for liquids, though there is the constricted sensation present and food and drink may regurgitate through the nose. (Liquids only — Lachesis.)

There is the sensation of a lump rising up in the throat from below, not particularly affected by swallowing.

The right side of the throat is likely to be first affected with or without extension to the left side, or the membrane in diphtheria, descends from the nose to the pharynx or from the upper part of the pharynx down the throat.

On waking the patient is cross, terrified or unrefreshed, not suffocated or choking.

The aggravation comes in the late afternoon and early evening, 4 to 8 p. m.

Warm drinks usually relieve, but occasionally there is the opposite state of amelioration by holding cold water in the mouth.

The other symptoms are not present.

With *nuxvomica* many of the symptoms are absent.

External sensitiveness not marked.

Swallowing difficult of saliva, more so of food and still more aggravation after swallowing food.

The sensation of a lump or plug in the throat is present, and the patient is aroused at night with a sense of impending suffocation, exactly as with Lachesis.

Perhaps the right side of the throat is more likely to be affected with extension over both tonsils (diphtheria).

There is often aggravation lying down and after sleep — 4 a. m. and 4 p. m.

Stitches into the ear when swallowing

occur, with fetid ulcers in the throat in "nervous cases."

Phytolacca decandra is the last remedy of which I wish to speak.

There is some resemblance to *Lachesis*, but with additional symptoms, which are peculiar to *phytolacca*, the distinction is not difficult.

Deglutition: painful, difficult; and with every attempt excruciating pains through the ears; regurgitation through the nostrils; unable to swallow even water; almost impossible, i. e., deglutition, because the throat feels so dry and rough.

Sensation of a lump in the throat, causing a continuous desire to swallow; like a plug; worse on the left side, when swallowing saliva, or turning the head to the left.

Swallowing saliva especially aggravates; also worse from swallowing warm drinks.

The great pain at the root of the tongue when swallowing; the intense burning in the fauces as from a coal of fire; the dryness, with absence of other symptoms are sufficient to differentiate from *Lachesis*.

As the proof of the pudding is in the eating, so the evidence that a remedy has been properly selected lies in the relief or cure which follows its exhibition.

I have a number of cases which are apropos to this study of *Lachesis*, but have selected two which illustrate its use in nervous affections of the throat.

Case 1, is that of Mrs. —, who is now 39 years old, short, dark-complexioned, in good flesh. She has had three children. About eight years ago, during her last pregnancy, albuminuria developed. Labor was uneventful, but she was much prostrated and gradually drifted into neurasthenia. From this she slowly improved, but has never completely recovered.

She came under my care in April, 1899, complaining of certain nervous trouble of which the most annoying was esophageal spasm. The spasm was worse from swallowing solids or anything warm, and it was seldom that she went through a meal without it.

Solids went the "wrong way," and she

gagged. The condition was always worse during menstruation. She often waked with the choking, and when the attacks were bad could not lie down. There was pain from the throat to the left ear with the spasm.

She received then *Lachesis* 12x, four doses in water, one night and morning for two days, and placebo.

She gradually improved for ten days, was then worse, and then the remedy was repeated in the same way. Amelioration this time for two weeks and with another repetition still larger, till finally she would go four, five or six weeks between accessions, and at last no return unless she becomes over tired, either physically or nervously, which has not occurred for some time.

Case 2, one which ought to yield to *Lachesis*, is as follows: Mrs. G., 30 years old, tall, quite fleshy, very light complexion, with light hair. Married twelve years, one child, no miscarriage.

She has had more than her share of severe sickness. Scarlet fever when very young, diphtheria when six years old, and since her marriage malarial fever, then cerebro-spinal meningitis, followed by various paralyses and, later, nervous prostration. She has numerous discomforts, the worst being the way her throat has troubled her for six years.

When first lying down at night a smothering sensation is likely to come on in the throat, and she feels as if she must sit up, but is often able to remain lying in bed. There is no heart complication. At other times the aggravation comes at 4 a. m. — after sleep — with hoarseness and a feeling as if her breath were cut off, and a hot burning sensation in the throat.

At these times she can breathe through the nose but not through the mouth. This is all likely to continue till about ten o'clock in the forenoon.

Her neck is very sensitive to the slightest pressure of a ribbon or the clothes generally.

Sometimes there is a little pain, stinging in character, in the ears from swallowing.

She has been to me only twice, and the

report comes that she is somewhat better.

The remedy, if carefully exhibited, ought in time to completely remove the trouble together with many, and perhaps all, of the other discomforts of which she complains.

Senile Pruritus of the Tongue.

During the last three years Baumgarten has had occasion to observe two cases of pruritus of the tongue, occurring in elderly women, with all the characteristics of senile pruritus of the skin, and in one case followed later by cutaneous manifestations. A long array of remedies was tried, but without avail, the pruritus persisting unaffected. Some local or general cause can usually be found for tongue troubles and the diagnosis of senile pruritus should not be made until after the exclusion of affections of the stomach or intestines, constipation or other general cause, including the dry catarrh of the throat, which is a frequent companion of the menopause, and usually coincides with dryness, smarting and burning sensations in the tongue. The latter may also occur in cases of disturbed menstruation. Pure neuralgia of the tongue is extremely rare, but neurasthenic disturbances involving the tongue are not infrequent in both men and women. In three cases Baumgarten diagnosed tabes from the pains in the tongue alone, confirmed by the later course of the disease. Pains and smarting of the tongue, especially when accompanied by ptyalism, are very suspicious of commencing paralysis. In other cases, the symptoms noticed in the tongue were the precursors of some local affection. Varices of the base of the tongue are cauterized by some physicians, but this is useless unless the general cause inducing them is removed.

After blows upon the head, when a period of consciousness follows the first symptoms of concussion, and is later again replaced by a state of unconsciousness, there is evidence that cerebral compression is taking place, pointing to the necessity of surgical intervention.

SELECTIONS

Meningitis.

Kernig has given a very valuable sign as a diagnosis of meningitis, but which has continued to be unappreciated by the majority of physicians, and not mentioned in authoritative works. In forty-six cases of meningitis investigated by myself, I have observed it in forty-one — proportion of 90 per cent. It consists of the following: The patient should be examined successively in the dorsal decubitus and the sitting posture. In the first, it is very easy to extend the limbs completely, while in the second complete extension cannot be effected. There remains an angle of about 90 degrees in very marked cases, never more than 135 to 140 degrees. Complete extension becomes easy when the trunk of the patient is again inclined backwards. It is difficult to give an explanation to this fact, which is observed only in meningitis. — Med. Standard.

Tuberculosis.

The chief reason why the tuberculous should not marry are these facts: That 30 per cent of the cadavers of the tuberculous show urogenital lesions (Posner); that gonorrhoeal epididymitis has a special tendency to become tuberculous; that such an enormous percentage of the wives of tuberculous men develop that disease; and that the offspring of such parents so often present anomalies of weight, growth and nutrition, if not decided congenital disease. Hence, without usurping the innate right of individuals to decide such questions for themselves, it is plainly the duty of the physician to explain the dangers of matrimony under such conditions, and to urge single life upon those unfortunates contemplating marriage. — Am. Med.

Pneumonia.

If we examine the blood and urine of a pneumonia patient daily, from the fifth day on, and find eosinophile cells in the blood and chlorides in the urine, we may predict with absolute certainty a favorable crisis within twelve to eighteen hours.

Alcoholic Anuria Treated by Artificial Serum.

Dumont reports the case of an alcoholic individual who was suddenly seized with suppression of urine. This patient was very stout and it was difficult to outline the bladder by palpation and percussion. At the time that the author first saw the patient he had not urinated for 24 hours. He had taken great quantities of diet drinks of the diuretic class; his temperature was normal and his pulse very rapid. He passed, at long intervals, a few drops of albuminous urine. The following day his condition remained the same. A sound introduced into the bladder removed only a few drops of urine. The following day his general state became bad; pulse 140. The evening of the second day the anuria persisted, in spite of large doses of theobromine. The situation became grave and Dr. Dumont, basing his act on knowing the good effects of artificial serum in cases of uraemic eclampsia, prepared a sterilized solution of salt water. A litre was injected at three different places — the pectoral, abdominal and axillary regions — at the same time. On the following day the patient was completely transformed. A half hour after the injection he had a sudden evacuation of gas and he commenced to urinate. At the end of the first day the quantity had reached three liters and the albumin had disappeared. — Med. Rec.

White of Egg for Inflammations.

Lewith asserts that fresh white of egg, applied with the finger, soon dries into a protecting and contracting membranous shield, under which itching subsides and inflammations heal.

Ichthyol in Atrophic Rhinitis.

In cases of atrophic rhinitis, Douglas praises ichthyol. After the removal of the crusts and cleansing of the nasal passages the drug is used in one of three ways.

The first, by means of a watery solution of 10 to 20 per cent ichthyol applied on a large pledget of cotton, and introduced into the nares upon the atrophied areas. As soon as the nares have been properly cleaned by any method considered desirable, the pledgets are placed in

the nose and the patient is allowed to sit in the outer office for a period of fifteen to thirty minutes; after which the pledgets are removed and the oily sprays are used to finish the treatment.

In cases of atrophic rhinitis presenting ulceration, or localities in the nose where pus is particularly persistent, or in areas that are very much atrophied, it is used in full strength, rubbed directly into the parts; particularly, if one of these bad places is upon the nasal septum. Ichthyol is used on cotton, which is wound on a probe. This is gently rubbed for a period of four or five minutes directly into the atrophied mucous membrane.

The third method of using ichthyol is by means of salve — 40 grains of ichthyol and five grains of menthol, added to one ounce of vaseline. This is given to the patient to use at home after cleansing of the nostril, and also each night before retiring. The patient is directed to introduce into the nostril a piece as large as a good-sized bean, and then to snuff it back when most of the salve will be distributed over the inferior meatus, and will lubricate the nose rather thoroughly during the night, the excess of ichthyol escaping into the postpharynx and acting there as a lubricant.

Koplik's Sign in Measles.

It consists of shining red spots, in the middle of which there are very minute bluish-white efflorescences. He states that these spots have not received the attention which they deserve, and that they represent an absolutely trustworthy and early indication of the disease. The author cites fifty-two cases, in forty-five of which these spots were observed. In two of the remaining cases the patients were too ill to permit of a satisfactory examination of the mouth. The spots appeared on the mucous membrane of the cheek and sometimes of the lips. They are mostly few in number. A bright light is necessary, as they are not visible in a yellow light. They practically never run together. They are distinguished from thrush by their color and their rounded contour. They may be picked off with the forceps without pain or bleeding, and

they are then seen under the microscope to consist of large masses of epithelium undergoing fatty changes. They have not been observed in other acute illness. In every case where they were seen the measles rash followed, so that whenever they were present the child was at once transferred to the measles ward. The spots appear on the first or second day of the disease and increase in numbers up to the time of the skin eruption; they usually further remain for three or four days, lasting from three to six days. They produce no discomfort. No prognostic significance can be attached to them, as they were present both in mild and severe cases.

Warm Solutions of Cocaine.

The local anesthetic effect obtained with cocaine is more rapid, more intense, and more lasting if the solution is warm. The dangers of intoxication are thus much diminished, as the quantity of cocaine can be very much reduced if it is warmed. A solution of 0.5 or 0.4 per cent heated will produce a powerful effect.

Remedy for Rigid Perineum.

In rigid perineum Dr. Southworth says that "he who tries the following will never be without it. I consider it indispensable and infallible:

R Chloroform.....3 i j
 Æther sulphuricum....3 j
 Cologne Sp'ts.....0 j
 Misce. Sig.—Apply locally."

He further says: "It acts quickly and well. I have had large heads pass perineums which seemed impossible without extensive rupture, without the beginning of a tear even, when this preparation is used." — Med. Visitor.

Painless Treatment of Fissures in the Nipples

Maygrier and Blendal report on the treatment of 40 cases of cracked nipples. The nipples were dressed with orthoform which produced complete anaesthesia during suckling and kept the cracks aseptic. The powder causes only slight smarting. The infant put to the breast fifteen minutes later nursed eagerly since orthoform has neither taste nor smell. The anaesthesia lasts for some time. Orthoform

was tried in form of powder; in a moist dressing of boric acid and in a strong alcoholic solution dropped in the cracks. The alcoholic solution is considered the best since it penetrated the cracks more readily.

Orthoform is a white voluminous powder without taste or odor and absolutely non-poisonous. Besides being antiseptic it is also a local anesthetic when applied to mucous membrane, fissures, wounds and ulcers and may be given internally.

The Prevention of Tuberculosis in Babes Born of Tuberculous Parents.

Scott reports one case of chronic tuberculosis which occurred in a young married woman, 19 years of age. She was delivered of a baby girl weighing five pounds. The child was fed on modified cow's milk, and all communication between the mother and the child was prevented. At the time the author presented this report, the child, now 3 years old, appeared to be in perfect health. He reports a second case of acute tuberculosis which occurred in a young woman, married at 20 years of age. She enjoyed good health during pregnancy and during her confinement. On the twenty-seventh day after her confinement, she presented signs of acute pulmonary tuberculosis. The child up to this time had been nursed by the mother. Death occurred sixteen weeks after confinement. The infant also developed tuberculosis and died a week after the mother's death.

Treatment of Gall Stone Cases.

Cal. carb. 30x every 15 minutes to relieve the pain of a gall stone attack, i. e., gall stone colic. — Hughes.

Berberis, (tinct.) — every 15 minutes. — Hughes.

China 6x every 8 hours for four weeks to prevent their formation, then at increasing intervals. — Ruddock.

Chelidonium, (tinct.) — expels and prevents formation, has cured numerous cases. — Hughes, Hale, Ruddock.

Aconite 3x with large hot compresses over the seat of pain. — Ruddock.

Podophyllin 3x to aid expulsion. — Ruddock.—Dr. Horace Packard.

Osler, in writing of the intestinal features of typhoid fever, strongly condemns those methods of treatment which are based upon the view that the disease is enteric rather than systemic. He considers early free purgation harmful and is always glad to see moderate constipation rather than diarrhoea, since these cases have much less meteorism.

He does not disturb the bowels in the course of the disease, except for marked tympanites, hemorrhage, or active diarrhoea and does not use intestinal antiseptics. For constipation he gives injections, dilutes the milk and gives increased amounts of albumen water.

He condemns the Wodbridge treatment.

Heart Defects and Pregnancy.

The prognosis of pregnancy in case of cardiac defect is not so serious as has been generally assumed, judging from the experiences at Schauta's clinic since 1892. They include 94 patients with 305 births, out of a total of 30,613 deliveries in the Maternity. Fillner has also collected 140 cases from the literature, with 520 births. The results show that with appropriate treatment the overwhelming majority of the patients pass through the stress of childbirth without any special disturbance or even a suspicion of their cardiac defect. Delivery is frequently longer than usual. In all cases of uncompensated cardiac defect a more or less extensive ring of necrosis is found at the edge of the placenta. The pregnancy was spontaneously interrupted in 20.2 per cent of the cases, with a mortality of 25.5 per cent for the children. Only a very small percentage succumbed to the heart trouble; 6.3 per cent at Schauta's clinic and .9 per cent of all those systematically investigated. Mitral stenosis alone seems to afford an unfavorable prognosis. In other conditions, it is not the kind, but the extent of the defect which is the decisive element. Only in the rarest cases is any unfavorable influence on the heart defect from the pregnancy to be discovered. In case of compensated defect, premature delivery is not indicated unless the patient was in peril of death in

previous childbirths. In case of uncompensated defect premature delivery is noted only when internal treatment has no chance of success; otherwise internal treatment should be applied first and after improvement has been obtained, the pregnancy should be artificially interrupted. Mitral stenosis, and the complication of a cardiac defect by chronic nephritis or tuberculosis, require more vigorous procedures. In case of compensated defect, the bougie alone should be used. If a fatal termination is imminent, the fetal membranes should be ruptured which will give temporary relief, and may prove useful in case of edema of the lungs. It is better not to wait too long before applying the forceps in case of an uncompensated cardiac defect. Marriage need be forbidden only in case of pronounced disturbances in compensation, or mitral stenosis or a defect complicated by tuberculosis and chronic nephritis. If severe disturbances in compensation appear during the course of a pregnancy, future pregnancies should be forbidden, and in case of deadly peril during a pregnancy, the patient should be rendered sterile.

Next to alcohol, as a poison to the nervous system, in common use, stands opium with its derivatives, especially morphine. This most useful and very efficient drug for relief from pain is likewise a most fruitful cause of relentless physical and mental suffering.—Dr. J. M. Aikin.

The now well-recognized special liability of children suffering from measles to contract diphtheria is probably an example of the toxin of the former disease preparing the soil in the human system for the luxuriant growth of the diphtheria bacillus.—Medical News.

In children and young people complaining of pains about the joints or limbs never be satisfied with anything but a searching examination. It will not do to lightly make a diagnosis of rheumatism, for both osteo-myelitis and certain malignant tumors may thereby be overlooked.

SURGICAL ERA

CHAS. ADAMS, M. D., EDITOR

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QUESTIONS AND ANSWERS REGARDING SYPHILIS.

QUESTIONS PROPOUNDED TO SYPHILIOGRAPHERS.

These questions, covering some of the more interesting of the doubtful points in regard to syphilis, were submitted to a number of syphilographers, and their answers appear in the following articles:

(1) What is the safest course in the diagnosis of syphilis?

(2) Has the range of remedies in syphilis increased in recent years?

(3) What is your opinion as to the secondary period of syphilis having been skipped in cases which develop severe tertiary lesions without a history of precedent active syphilis?

(4) In how far should the physician assume the responsibility in sanctioning matrimony in syphilitics?

(5) What is your opinion as to the transmissibility of syphilis in the progeny of a tertiary syphilitic?

(6) Do you know of any case in which unequivocally syphilitic fathers have procreated children who have remained healthy?

SYPHILIS MAY BE BENIGN, SEMI-MALIGNANT OR MALIGNANT.

(Answers by Louis A. Duhring, M. D., of Philadelphia.)

(1) The safest course to pursue in the diagnosis of syphilis, whether of the integument or of internal seat, is to proceed slowly in arriving at a conclusion. In every instance if there is any doubt, the patient, whether infant, child, man or woman, should have the benefit of that doubt; and even in cases where there is

(We take this series of articles on syphilis from the *International Medical Journal*, Oct., 1901, and give it to the readers of *The Era* as a valuable symposium on the subject.—Ed.)

no doubt, close and it may be prolonged observation of the lesions will frequently aid in determining the natural evolution of the disease and thus to some extent the treatment best adapted to the case in hand. An important point to determine in all instances before beginning active treatment is whether the disease disposes to take on a malignant or a benign action or course. Practically speaking, those who have seen much of syphilis and have followed cases throughout life, or say for a period of thirty years, will know that from a clinical standpoint there are two forms of the disease—a benign or a mild form, and a malignant or semi-malignant form; the one yields readily to treatment, the patient usually getting well rapidly and remaining so with but little or no further treatment; the other proving rebellious to drugs and improving only after heroic and persistent medication.

(2) The range of remedies has surely increased of late, and for the reason that the so-called specifics in the treatment are not relied upon so much as they were thirty years ago. Various drugs other than the so-called specifics are often made use of with good results, as, for example, iron.

(3) There is no doubt that in some instances the so-called secondary lesions are skipped. In these cases tertiary lesions may develop, but not necessarily severe forms of lesions. I have seen mild tertiary lesions, which yielded readily to treatment, get well and remain away for a long period. In some few cases of this kind there is no history even of the primary manifestations of the presence of the disease. Unless a case has been neglected as to treatment in primary and secondary periods, the chances are in great favor of any tertiary symptoms that may occur being mild in type.

(4) Patients, especially men, who have contracted syphilis are likely to acquaint themselves, through one channel or an-

other, with the natural history of that disease and the date at which they may marry, if they so desire, with safety to the health of children that may be born in wedlock; hence they are not likely to abide by the decision of any one physician, but rather to take the consensus of opinion on the subject. In mild syphilis three years usually suffices to render the subject free of taint; in very mild cases even two years. Thus the adviser on this question must ever keep in mind whether he is dealing with a benign, a semi-malignant or a malignant syphilis.

In a case of mild syphilis healthy children, that remain healthy, may be born in the third year after the initial lesion of syphilis. I have seen healthy children born in the third and fourth years after the initial lesion in both husband and wife; in which, however, the disease was benign throughout in both the husband and the wife. An opinion on this question thus depends on the form of syphilis, as to benignancy or malignancy, that exists in the parents—in one or in both.

(6) Syphilitic fathers, after proper treatment, may undoubtedly procreate healthy children, and children that remain healthy; the length of time (years) that these children may remain healthy is, however, a question difficult to answer with assurance. I think, however, the question, generally speaking, may be answered in the affirmative, especially in benign forms of the disease as concerns the father or the mother.

THE MANY SOURCES OF ERROR IN PROBLEMS CONCERNING SYPHILIS.

(Answers by G. Frank Lydston, M. D., of Chicago.)

(1) A positive diagnosis of primary syphilis is not so frequently possible as is generally supposed. If the differential diagnostic tables of the various textbooks were reliable, the diagnosis of syphilis in the initial stage would be a very simple matter. Unfortunately, however, practical experience shows that differential tables are often of very little value. Indeed, it is questionable whether they do not lead directly into diagnostic errors in many cases in which sources of confusion

exist. Especial stress is laid upon the period of incubation by many teachers of syphilology. This is one of the chief sources of error in the diagnosis of syphilis. Nothing is more uncertain and erratic than the so-called period of incubation. I say "so-called," advisedly, for the period, as usually estimated, comprises, not the time which elapses from inoculation until the appearance of the first manifestations of the disease, but the period of time which elapses between exposure to inoculation and the discovery of a lesion upon the genitalia. The sources of error here are obvious. First, the patient does not examine himself frequently, and observes the lesion long after it first appears. Second, inoculation does not immediately occur, but takes place some days after exposure. The patient's story is relied upon to determine the date of exposure. He often sets a date which corresponds, not to the date of the real exposure, but to the date of coitus with some particular woman whom he suspects. He often has one or more female friends whom he considers above suspicion, and whom, consequently, he leaves out of his calculations entirely. The induration so glibly described by authors is so plain that, when typic, he who runs may read. But there are many shades of variation between the classic Hunterian chancre, which an expert might diagnose with his eyes shut, and the slight parchment induration which so often resembles simple inflammatory induration. Then, too, a typic induration may become inflamed and its typicity become masked by simple edema and hyperemia. Chancroid, in its various forms, and mixed or pus infection are likely to markedly modify chancre, rendering the diagnosis very obscure. Whenever there is doubt, we should wait until the course of the primary lesion, or its obstinacy, associated with typic bubo, clear up the diagnosis, or until secondary symptoms appear. The test of antisyphilitic treatment may sometimes be resorted to. When an indurated sore followed by classic bubo comes on after a prolonged period following a known exposure, the diagnosis of syphilis is generally safe. These cases are, however, not frequent. It is a noteworthy

fact that the most speedy and dogmatic diagnoses of primary syphilis are made by tyros in medicine. Conservatism in diagnosis increases with years of experience. It must be remembered that the patient with a venereal sore requires either no treatment whatever, or a thorough course of three years' duration. A mistaken diagnosis may occur to any one, however expert, but the more conservative one is, the less likely such errors are to occur.

(2) It is an undisputed fact that our armamentarium therapeuticum has not been enriched by any remedies which can be relied upon for the cure of syphilis, since the introduction of our old stand-bys, mercury and iodine. The various vegetable remedies have been tried and found wanting. There have been, however, certain additions to and modifications of our orthodox antisyphilitic treatment which have proven of great value. The hypodermic use of mercury, for example, has been of especial service. One of the most valuable adjuvants in the treatment of syphilis in my experience is potassium chlorate in full doses. Courses of this drug in alternation with mercury are of great value, not only because of the lessened danger of the excessive use of mercury, but also, in my opinion, because of the directly curative action of the chlorate. A distinct advance in the treatment of syphilis was made when we ceased trying to stamp it out on the antidotal plan and began treating it along the same rational lines as in the case of other infectious diseases presenting a natural course.

(3) With increasing experience I have grown more and more skeptical as to the possibility of the secondary or active period of syphilis being ever skipped. Syphilis, when typical, follows along somewhat regular lines. Its evolution, when uninterfered with, is not full of pathologic surprises. In considering the question of the secondary period being skipped, cases interfered with by treatment must be left out of consideration. The sources of error are several. First, the diagnosis of primary syphilis is not established, and secondary symptoms, not being looked for and being slight, are not noticed. Second, the symptoms are noted but at-

tributed to other and simpler causes. Third, the diagnosis of primary syphilis is made, but the secondary symptoms are slight, and the case is not closely watched by an expert; hence the symptoms escape attention. The roseola may appear and disappear quickly, and thus be overlooked. Often it is not well marked and the patient himself cannot see it unless his attention is called to it. It reminds one under these circumstances of a Chinese puzzle. It is not unusual for the patient to rub his hands over his skin triumphantly, saying, "My skin is as clear as a baby's," having fairly well marked roseola the while. A point worthy of attention is this. The external manifestations may be slight, yet visceral, vascular or nervous effects may be marked without definite symptoms. In brief, I hold the opinion that primary syphilis is always followed by active syphilis of greater or less severity, affecting either the superficies of the body or the deeper structures, or both. I believe, further, that cases of sequela or so-called tertiary syphilis, in which there is no history of an active period, simply mean that the latter has been overlooked. I grow more and more skeptical regarding syphilitic histories with the passing of the years, and more and more inclined to diagnose lesions in many cases upon their merits independently of their histories.

(4) The physician should assume no responsibility whatever. He should state to the patient frankly that we have no known means of pronouncing a patient permanently cured of syphilis. He should give an opinion as to the relatively favorable or unfavorable character of the case, and an idea of the usual percentage of cures. He should inform the patient that the danger to wife and offspring grows less and less year by year, and that the danger is comparatively slight after three or four years of careful and apparently successful treatment. He should assure him that absolute safety cannot be guaranteed. After all has been said the patient must decide for himself the question of assuming the responsibility of marrying and raising a family. The profession is in the habit of allowing the laity to impose upon it in this matter. I, for one, rebel against

the custom. In brief, the physician should state the facts as he understands them and let the patient decide for himself as to the degree of risk he is willing to undertake.

(5) I am skeptical as to the possibility of transmission of syphilis to the offspring of tertiary syphilitics. If the view that tertiary syphilis is made up of sequela lesions be correct, the transmission of the disease should be impossible. The active infection is at this time exhausted, and the germ probably no longer exists. Cases of apparent transmission of the disease in the so-called tertiary stage are not rare. The sources of error are: First, the classification as tertiary, phenomena that are really secondary. That the line of demarcation is often difficult to draw is admitted. Second, the impression of the offspring with nutritional perversions of various kinds, due to the profound nutritive disturbance produced by sequela syphilis in the parent. The progeny of a parent severely afflicted by tertiary syphilis may be walking pathologic exhibits, but it by no means follows that they are victims of transmissible syphilis. The point is difficult of proof. The conditions necessary for proof are, first, to show that one or both parents are syphilitic; second, that one or both of them present sequela lesions; third, to prove that neither has secondary syphilis; fourth, to prove in the case of a supposedly healthy mother and a supposed father with sequela lesions that the paternity is not open to suspicion; fifth, to show that the child with alleged syphilis is capable of infecting a healthy person. Obviously, this question is not likely to be settled positively and must always remain in the domain of speculation. The problem, it seems to me, revolves around the question, Is the germ of syphilis in active form present in so-called tertiary syphilis? It is a noticeable fact that while a male subject with tertiary syphilis often procreates apparently healthy children, the female thus affected rarely does. Nutritional perversions are more often seen in the children.

(6) Yes, a large number of cases. This includes cases (a) in which the fathers had

been apparently cured, and have remained so; (b) cases in which the father has relapsed at varying periods after the birth of the child; (c) cases in which the father had evidences of active syphilis at or about the time of conception. These fathers all had late syphilis. I do not know of any case in which a father in the first year of syphilis has procreated a healthy child. In these cases the mother is usually infected sooner or later, and the child is surely syphilized unless the mother is infected after the seventh month.

THREE YEARS OF ACTIVE CONSTITUTIONAL TREATMENT NECESSARY.

(Answers by Orville Horwitz, M. D., of Philadelphia.)

(1) Wait for the first manifestations of secondary symptoms.

(2) No.

(3) It is usually so mild as not to have been observed by the patient. In the rare form of so-called "irregular syphilis," the secondary period of the disease is sometimes absent. A period of quiescence follows the initial lesion, tertiary symptoms finally making their appearance.

(4) If a syphilitic has had three years of active constitutional treatment, and is afterward kept under observation for one year, during which time no sign of the disease has made its appearance, the individual may marry with safety. Many syphilitics marry after a lapse of from eighteen months to two years from the date of infection, without infecting the wife, or their progeny. It is, however, a dangerous course to pursue, attended with great risk.

(5) Children born of parents suffering with tertiary syphilis are healthy, unless the parents are afflicted with the irregular form of the disease, when both the secondary and tertiary symptoms are present at the same time. In this case the child will be tainted with syphilis.

The danger of transmitting the disease practically reaches the vanishing period about six years after infection.

(6) Yes. Where patients suffer from tertiary syphilis.

NO RESPONSIBILITY SHOULD BE TAKEN REGARDING THE MARRIAGE OF SYPHILITICS.

(Answers by Thomas G. Morton, M. D., of Philadelphia.)

(1) Seek the assistance of a competent medical man.

(2) Not materially.

(3) There is no question but that the disease passed through the regular course, but the symptoms were probably insignificant and not recognized.

(4) The medical man should hesitate in sanctioning matrimony in any case of syphilitic infection, and assume no responsibility.

(5) A person who has been infected by syphilis might be expected to transmit more or less taint.

(6) Yes, so far as observation for some time went; apparently healthy children have been the result of a union in which one of the parties had previously had syphilis; at any time a syphilitic lesion might appear in such a child.

MARRIAGE OF SYPHILITICS SAFE AFTER FIVE YEARS OF ACTIVE TREATMENT.

(Answers by Edward L. Keyes, M. D., of New York.)

(1) To reserve judgment until all the evidence is in, or enough of it to speak with assurance. In case of continued doubt to reserve opinion, to maintain doubt, and to abstain from specific treatment during doubt.

(2) Yes.

(3) I believe that the secondary period may be skipped absolutely; but in most instances of alleged skipping I believe that mild lesions have existed and been overlooked.

(4) Marriage of the male may, in my opinion, always be safely sanctioned five years after the date of chancre, if the patient shall have been submitted to a prolonged thorough mercurial course during said five years.

(5) I believe that syphilis is never transmitted—as syphilis—to the third generation.

(6) Yes.

In pistol shot wounds of the abdomen, prostration from emotion and fear may be very great. Pain may be considerable or practically absent. If the patient remains intelligent, the skin is warm, and the abdomen soft, he must be watched but there is no indication for operation.

It is an invariable rule that, in cases of stricture, whether urethral or due to prostatic trouble, if a catheter has been passed with much difficulty, the bladder should be washed through it and the catheter left in situ for twenty-four hours. This will always permit the introduction of a larger instrument later on.

In septic compound fractures, the fracture itself must be disregarded at first, although some extension is advisable in order to prevent undue contraction of the muscles. The important thing is to treat the sepsis, and this can never be done successfully unless drainage and counter-drainage are thoroughly attended to.

A patient with appendicitis in a severe form, who suddenly feels better, while the temperature remains high, does so, as a rule, because the tension has been diminished by the giving way of adhesions. This is a serious complication, as it implies the probabilities of impending general peritonitis, and immediate operation is usually needed in order to save the patient's life.

Each of the 103,000 physicians in the United States, it is probable, attends on an average two cases of appendicitis every year. This would amount to 206,000 cases. Supposing these to be treated by medicine alone and with a mortality of 25 per cent, the deaths would number 51,500. Supposing them to be treated by early and skillful operation with a mortality of 1 per cent, the deaths would only amount to 4,120, or a saving of 47,380 lives by timely operation. A "scientific fad" which saves this number of lives every year is a good thing for the country. — Medical Dial.

BOOKS

THERAPEUTICS: ITS PRINCIPLES AND PRACTICE. By Horatio C. Wood, M. D., LL. D. Eleventh edition. Remodelled and in greater part rewritten by Horatio C. Wood and Horatio C. Wood, Jr., M. D. Philadelphia and London. J. B. Lippincott Company. 1900.

The eleventh edition of this standard work contains the subject-matter included in previous volumes, together with all the latest developments in this branch of medical science. This includes the therapeutics of suprarenal capsules, of the toxins and the anti-toxines, and other recent contributions to the *materia medica*. But, as the author states, the principal changes in the work consist in a rearrangement of the subject-matter, employing a variety of type, and also the elimination of some minor discussions and other matters of comparatively little importance included in former editions, which has permitted condensation and the making of a book more compact in size and yet containing everything belonging to a complete treatise on this subject. Wood's "Therapeutics" is a work so well known that this volume calls for no extended analysis; it is enough to say that it is an up-to-date edition of this standard work.

PROGRESSIVE MEDICINE. A QUARTERLY DIGEST of advances, discoveries, and improvements in the Medical and Surgical Sciences. Edited by Hobart Emory Hare, M. D., assisted by H. R. M. Landis, M. D. Volume III. September, 1901. Diseases of the Thorax and its Viscera, Including the Heart, Lungs and Bloodvessels—Dermatology and Syphilis—Diseases of the Nervous System—Obstetrics. Lea Brothers & Co. Philadelphia and New York. 1901.

The third volume for the year of this welcome digest has come to our table. It opens with a section on the diseases of the lungs and of the heart by William Ewart, M. D. The literature of medicine has been well gleaned and the student of diseases of the chest will here find the latest authoritative additions to medical science. The other sections, on dermatology, diseases of the nervous system

and obstetrics, will be found to be of great value in their several lines.

The good quality of paper, the press work and the neat binding will also attract the attention of all lovers of books.

DISEASES OF THE HEART. By A. L. Blackwood, M. D. Published by Halsey Bros. Co. Chicago and St. Paul. 1901.

Dr. Blackwood presents to the profession a neat volume of 260 pages devoted to the subject of diseases of the heart. While the work is not exhaustive, yet it is a carefully prepared treatise on the various forms of cardiac affection, systematically arranged. Under each subject in short paragraphs is given etiology, pathology, symptoms, diagnosis, prognosis and treatment. Under the latter the familiar heart remedies—digitalis, convallaria, strophanthus, crataegus, sparteine, agaricine and the others are enumerated—together with their specific indications.

We congratulate Dr. Blackwood on the production of his neat volume, which the general practitioner will find of great use in treating cases of this class.

A TEXT-BOOK OF GYNECOLOGY. EDITED by Charles A. L. Reed, A. M., M. D. President of the American Medical Association (1900-1901). Illustrated by R. J. Hopkins. D. Appleton and Company. New York. 1901.

In the preparation of the text of this work Dr. Reed has received contributions from a long list of skilled specialists in this subject, no less than thirty-one having contributed to the volume. Credit to each author is indicated in the table of contents. In the body of the work the material is so arranged as to appear to be the product of but a single writer, thus making a harmonious whole. This, we think, is an advantage over the usual method of making up a volume of what appears to be disjointed parts. The illustrations are numerous and well executed and they must add greatly to the value of the work since they illuminate the text and make clear the diseased conditions and the methods of operation. The subject-matter is systematically ar-

ranged and supplies the latest that there is on this important branch of surgery. It is a single volume work of 900 pages gotten up according to the best traditions of the book-maker's art.

Hall Caine relates in the "Eternal City" how a practitioner in Rome found a cancer in the breast and stated that if it had been sooner recognized "nephrectomy" might have been possible, but that it was now beyond remedy. Whatever else may be said of Mr. Caine he certainly is no medical student.

In Paris wet nurses must not leave their infants to be bottle fed, according to a recent order of the prefect of police, but must see to it that they are in part or wholly nourished at the breast. There is now a dearth of wet nurses in Paris and Parisian mothers are in despair.

A nurse who looked after a patient who was said by two physicians to have no contagious disease but who turned out to be suffering from smallpox, which the nurse contracted, is now suing the physicians for \$10,000.

A passenger on an incoming European steamship, 250 miles from New York, was able, by means of "wireless" telegraphy, sending his dispatch at about the middle of an afternoon, to notify a friend of the serious illness of another passenger, and summon aid on the ship's arrival the next morning.

Russia.

There are about 100 homeopaths, 20 dispensaries, 1 hospital and 30 drug stores in the entire country. The homeopaths are preparing to gather for the first time in St. Petersburg.

It is better to discard carbolic acid entirely in the treatment of wounds in children. Not only do they develop gangrene very readily from its continuous effect in wet dressings, but fatal cases of poisoning have been known to occur from the application of so weak a solution as 1-40.

MEDICAL ERA

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CH. GATCHELL, M. D.,

Editor Medical Era,

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The Medical Era does not send out sample copies promiscuously. If you receive the Era it is because you are on the books as a bona fide subscriber.

Dr. Harvey B. Dale, Oshkosh, Wis., is president of the new Central Wisconsin Medical Club. The club will meet quarterly. It is a district organization, and when complete will have a membership of about fifty.

\$3,000 practice for sale in large county seat in Central Kansas. Price low. Reasons for sale, wish to practice specialty in larger town. Only homeopath in the city. Address E. K., care of Medical Era.

Remember that The Dr. C. E. Sawyer Sanatorium, Marion, Ohio, is open all the year. Special arrangements have been made for the care and comfort of all patrons during the winter months. To such of your patients as require sanatorium treatment or those who are only needing rest and recuperation, this affords an ideal institution to which to send them for the winter.

In bullet wounds of the head the bullet itself is commonly too small to give symptoms of compression. If the latter exist they point to pressure by hemorrhage or fractured bones, and an operation is indicated.

**they
say**

That silence is sometimes the best argument.

That you should never leave a woman in an ill-humor.

That time is money, and it takes money to have a good time.

That it is better to have loved and lost than never to have lost at all.

That it requires no skill to win the game when you hold all the trumps.

That fortune knocks once at every man's door, but misfortune walks right in.

That in order to be truly wise a man must go up against at least one flim-flam game.

That every woman is up well enough on mathematics to tell how much her husband would save if he quit smoking.

That hope lies where sky and sea meet.

That all that a fisherman makes are net profits.

That Yankees rush in where angels fear to tread.

That the wrong road never yet led to the right place.

That no man is ever beaten until he says to himself that he is beaten.

That some men say worse than they mean and some mean worse than they say

That the man who could have done the thing right if he had only been there, never gets there.

That a needle never does anything unless it is pushed, and it is the same way with some people.

MEDICAL ERA

CH. GATCHELL, M. D., EDITOR

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NO. 12

COMPRESSION OVER THE PRECORDIUM IN HEART DISEASE.

Any new method of treatment in diseases of the heart, whether palliative or remedial, is always made use of by the alert practitioner. A simple method of this character has recently been suggested by Dr. Abee of Nauheim. Its use was suggested by the fact that many patients suffering from diseases of the heart seek relief by making pressure against the precordium. Acting upon this suggestion Abee makes use of a pad, or some convenient form of apparatus, which shall be constantly worn by the patient, thus fulfilling the condition that is obtained by the pressure of the patient's own hand.

Mendelsohn, in the *Berliner Klinische Wochenschrift*, expresses the opinion that the relief which the apparatus affords is not the result of any support or lifting of the heart, but depends upon compression of the chest wall. An amelioration of symptoms is obtained in cases presenting cardiac enlargement, with hypertrophy and dilatation of the left ventricle. In such cases the heart is in direct anatomical relation with the lateral as well as with the anterior chest-wall, and each movement of the heart is forcibly and directly communicated to these parts, producing a notable physical shock. Mendelsohn believes that the painful sensations experienced by the patients reside very largely in the hyperesthetic thoracic wall, and not in the heart itself; hence the value of supporting the thorax in the cardiac region, and thus limiting the violent shaking of the parts. In addition, compression of the thorax, to a degree not inconsistent with freedom of respiration, is said to lessen excessive cardiac motion and to abolish disagreeable sensations dependent on such motion. A thorax-compressor has been de-

vised by Dr. Graupner of Nauheim. A plaster cast of the thorax is first prepared, and from this is cut the part which corresponds to the superficial cardiac area, overlapping this area by two or three finger-breadths at each margin. From this cast a metallic plate is prepared, and to the inner side of the plate a flat air-cushion, extending over the entire surface, is fastened. It is advisable to have attached to the air-cushion a rubber tube long enough to permit the patient to blow up the cushion when the latter is in place. The compressor is held in place by binders passing over the shoulders and across the back.

JAMES C. WOOD, A. M., M. D.

James C. Wood, M. D., President-elect of the American Institute of Homeopathy, has requested the publication of a communication which appears on another page of the *Medical Era*. We are very glad indeed to comply with Dr. Wood's request. It ought not to be necessary for any man in our profession to be called upon to make such explanation. No one who is at all acquainted with Dr. Wood would require a single word from him in a matter of the kind. He is well and widely known as a man possessed of the highest nobility of character, of the strictest integrity, and as one who is as sensitive — and justly so — touching a matter involving his good name as any man in public or private life. But since Dr. Wood has been wantonly assailed and a serious charge involving his integrity and good-faith published and distributed broadcast to the profession, it is well enough that he

should present the facts in the case in order to reveal to the public how reckless and unfounded was the charge.

To assail a man's character in the public press is a grave thing; to do so without the slightest foundation for the vicious act is a dastardly thing.

Before rushing into print with a serious charge affecting the character of another, a man should be absolutely sure of his ground. By previous investigation and the most searching inquiry he should be prepared to support with the strongest and most incontrovertible evidence the truth of every statement that he makes. In the present instance a challenge to do so flatly and utterly failed. A charge brought against another under such circumstances reveals a spirit of malevolence and a prejudice against the object of attack. No disinterested person inspired by true motives ever commits such an act. An injury of this character is not atoned for by seeking, after the act is committed, the facts which should have been ascertained before the charge was given publication. If this course were pursued no man would be safe from the malign attack of any prejudiced and reckless person.

In the interest of truth, and in the interest of his friend Dr. Wood, the editor of the "Era" is very glad to take part in setting this matter right. We cheerfully devote to it the necessary space.

When Judge Elbridge Hanecy was running for the office of Mayor of Chicago, in the course of a speech that he was making at Sharpshooter's Park, a man in the audience shouted a false accusation against him. In replying to the man the Judge said:

"The man who will make charges derogatory of the character of another without having tried to inform himself correctly concerning those charges is as much of a liar as if he willfully lied."

We think Judge Hanecy's remark strictly applicable in this instance.

ORIGINAL ARTICLES

A FEW USEFUL REMEDIES IN THE POST-OPERATIVE TREATMENT OF SURGICAL CASES.*

BY JAMES C. WOOD, M. D.

CLEVELAND, OHIO.

PROFESSOR OF MEDICAL AND SURGICAL GYNECOLOGY IN THE CLEVELAND HOMOEOPATHIC MEDICAL COLLEGE.

The question is often asked by the laity, "Is there any difference between allopathic and homeopathic surgery?" Of course, the answer must be that, so far as mere mechanics are concerned, there is no difference, but you and I, as homeopaths, know that there is a vast difference in the post-operative treatment of all surgical cases. Personally, I should dislike to practice surgery without having at my command a class of remedies which have done for me yeoman service. The list is not a long one, but the few remedies which I have learned to use in dealing with the complications and sequelae following operative work have served me so well that I desire to emphasize their value in controlling the pain, restlessness and inflammation incident to post-surgical treatment.

I do not profess to get on without certain agents which act in a purely eliminative way—the saline cathartics, for instance; or agents which are sometimes necessary to carry an enfeebled heart through the period of surgical shock. Occasionally, too, I find it necessary to resort to opiates, and sometimes most advantageously. However, the cases in which it is necessary to give opium are not numerous, and in the large majority of instances its administration is not only unnecessary but harmful. My object is simply to present a few of the remedies most commonly used by me for the condition under consideration. I claim no originality in either their selections or the indications calling for them. Nearly all belong to the polycrest group and are well tried.

* Read at the semi-annual meeting of the New York Hom. Medical Society, Niagara Falls, N. Y., October, 1901.

Two remedies, aconite and hypericum, are used by me oftener than any others for the restlessness which so frequently follows surgical work. With aconite there is the agonizing desire to toss about, which is so characteristic of the drug. Where this condition is present, especially where there is fear of death, it is my practice to begin the drug just as soon as the stomach will tolerate anything. I give it in the third potency at least every hour until the nervous apprehension passes away. Hypericum is more useful if pain is a marked symptom, and particularly if the operation has been such as to cause profound shock. There is often cutting pains between the scapulae with stitches in the small of the back; or cutting pains and sensation of lameness in the small of the back. There may be tympanitic distension with cutting pains in the region of the navel. I usually give this remedy in the first decimal dilution every one-half, one or two hours, according to the urgency of the symptoms.

Arsenicum is one of the most useful of all remedies in aiding the system to care for the ptomaines and exudates instant to surgical work. There is great restlessness, prostration, weakness of memory, thirst, irritability of the stomach with nausea and vomiting. The urine is scant, and there may be retention of urine from bladder paralysis. As time goes on the urine becomes dark brown and turbid with approaching symptoms of uremia. With arsenic the restlessness is one of prostration rather than of hypersensitiveness.

Apis mellifica is another remedy which has helped me out of many a tight scrape in abdominal surgery. It is, I believe, the most useful of all remedies at our command in cases of threatened uremia. There are renal pains with frequent and sudden attacks of pain along the ureters. The patient will experience a desire to empty the bladder often with the passage of only a few drops. The urine is scant, high colored, very often fetid, and after standing becomes turbid. A chemical and microscopical examination will show

varying quantities of albumin and tube casts. There is loss of consciousness, stupor interrupted by piercing shrieks, impaired memory, with absent-mindedness. The apis patient is usually of an irritable disposition, hard to please, and exceedingly nervous. In all cases of suspected renal insufficiency, saline infusions and enemata with the hot pack, and, if necessary, a hypodermic use of pilocarpine are to be brought into requisition. However, the timely administration of apis will frequently make these measures unnecessary.

Rhus toxicodendron is also a most useful remedy where the restlessness is a prominent symptom and septic manifestations become prominent. It has a much lower type of restlessness than we find in either hypericum or arsenic. There is incoherent talking with a low, mild delirium. The prostration is marked. There is a restless desire to change position in bed; the tongue is dry, red, and cracked; the mouth is dry with much thirst; the breath is putrid. The patient is usually worse at night and seems to get relief in the change of posture. The abdomen is bloated and the patient will frequently complain of a sore, bruised sensation in the abdomen.

Cimicifuga is most useful for the intense backache which so frequently follows the dragging down of the uterus in gynecological plastic surgery.

Bryonia and belladonna are called for in contending with peritoneal irritation following celiotomies. The usual head symptoms of belladonna may be absent. The pain is always of a shooting, darting character, coming and going in quick succession. There is distension of the abdomen with loud rumbling in the bowels. The patient cannot bear to have the abdomen touched; tenderness caused by even slight pressure over the ovarian region.

In bryonia the slightest movement will aggravate the pain. There is also gripping pains about the navel, with rumbling and gurgling in the bowels. Respiration will frequently cause stitching pains in

the abdomen. Bryonia is especially useful in the thoracic complications which sometimes arise as a sequel of the anesthetic.

Colocynthis is often necessary to overcome the cramp-like pains in the abdomen, which are relieved by the patient drawing the knees toward the abdomen. The colic of colocynthis, unlike that of belladonna, is relieved by pressure.

Antimonium tartaricum is invaluable in contending with the bronchial irritation which so frequently follows the administration of ether.

Antimonium crudum is of equal value in overcoming the indigestion which is attended by pain at pit of stomach. With it there is belching with taste of what has been eaten, with a thick, white or yellow coating of tongue. Not infrequently the abdomen is distended with much rumbling of incarcerated flatus.

Magnesium phos. is often prescribed by us to overcome spasmodic pains in any part of the body, but especially if there are spasmodic pains in the bladder and urethra.

It is hardly necessary to say to this audience that china is the remedy above all others for anemia resulting from loss of blood. Later on, when it is necessary to build the patient up, calcarea phos. is one of the best of all reconstructing remedies for anemia and prostration.

China and lycopodium are of signal service if flatulence is troublesome.

The serpent poisons and phosphorus are always to be thought of where blood degeneration is a marked symptom, particularly in septic conditions.

As I said at the beginning of this paper, I have nothing original to present to you. I think that surgeons too often take it for granted that general practitioners will understand that the indicated remedies are given in post-surgical treatment, and therefore, in reporting cases, say but little regarding internal medication. We cannot too often review the indications for certain remedies which, I believe, will aid us many times in saving life when death would result were such remedies not administered.

ROSE BUILDING.

SOME MEDICO-LEGAL ASPECTS OF THE CREMATION PROBLEM.*

BY J. R. KIPPAX, M. D., CHICAGO.

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IN CHICAGO HOMOEOPATHIC MEDICAL COLLEGE.

The chief purpose of this paper is to outline briefly the present state of the law, and to emphasize the urgent need of adequate legislation regarding the practice of either cremation or incineration, to effectively protect the public interest against its abuse for the concealment of crime.

It would be in point, perhaps, to state at the outset that cremation is defined as being the reduction of a human body to bone-ash by direct fire in an open retort or on the pyre; and that incineration is the reduction of the human body to bone-ash by extreme heat in a closed or partly perforated fire-clay retort. The former is the method now employed at the Graceland crematory, Chicago, and at the Milwaukee crematorium; while the latter — a preferable method — is the one followed at the Detroit crematorium, and at the crematories at Cincinnati, Buffalo, and Fresh Pond, New York.

In recent years the subject of cremation or incineration as a reform measure and a most rational treatment of human remains, has been occupying an increasing share of attention. The practice has extended so rapidly that to-day, nearly every city of two hundred thousand inhabitants in this country has a crematory.

The average number of cremations or incinerations per annum, for the ten years preceding January, 1899, was eight hundred and thirty. The number in 1898 alone, was sixteen hundred and ninety-nine. The grand total of cremations in the United States up to January, 1901, was over thirteen thousand. In this city the average number of cremations per annum for the eight years preceding January, 1901, was eighty-seven. The number in 1900 was one hundred and eighty-eight.

The main practical objection which can be urged, in the medico-legal world, against this method for the disposal of

*Hom. Med. Soc. of Chicago.

the dead, is the possibility that crime may not infrequently escape detection in the case of cremated bodies. By the destruction of much, if not all, evidence as to the mode of death, particularly in cases due to poison, violence, or criminal neglect, it may, unless properly safeguarded, afford a serious opening for crime. The fact is to be noted also that cremation or incineration precludes exhumation, and so does away with the possibility of obtaining late expert post-mortem evidence of the cause of death. Speaking on the subject before the Medico-Legal Society, of New York, Mr. Frederick L. Hoffman, in referring to suspicious cases, stated, "The point of importance in cases of cremation is that suspicious circumstances might arise after death, when it would be too late to have an investigation made into the state of the body."

As indicating the present practice and means adopted to protect public interests, I submit extracts from some of the replies I have received in answer to letters of inquiry addressed to the Health Departments of a number of our leading cities. From these it would appear that in many cities and States the practice of cremation or incineration is subject to no statutory regulation, and is absolutely uncontrolled.

In this city Dr. M. O. Heckard, the Registrar of Vital Statistics of the Department of Health, states, "permits for cremation are required and issued the same as for earth burial. If a physician gives in his certificate as cause of death, casualty, violence, or any undue means, the case is referred to the coroner, who is under the statutes the proper inquisitorial body. In such cases all processes of embalming, etc., are by law prohibited." Any person violating the rules and regulations concerning the burial of the dead shall be liable to a fine of not more than one hundred dollars.

It is clear that in Chicago, where nearly two hundred bodies are cremated annually, the present ordinance on the subject can hardly be considered as providing sufficient safeguards to properly protect the community, as practically the same method in giving permits is adopted with reference to cremation as to inhumation

or earth burial, and no legal delay is required between the death and the cremation. In view of the great need of preventing any irregular use of the process, and the present anxiety to more effectively cope with the resources of criminal ingenuity, it would seem that a far more searching inquiry into the cause or causes of death and attending circumstances, than is now made in all ordinary cases, should be required in every case before a permit for cremation is granted.

During the present year public attention has been directed in this city to a remarkable insurance conspiracy case, where it was alleged the defendants had planned to secure money by false pretense and through insurance policies on the life of a young woman, who had been led into the criminal scheme. To the great majority of the people who have followed the case, the intent appeared to be, to have the unfortunate woman die by proxy, and to have a corpse substituted for her living body and cremated. The sudden death of the young woman, followed by the reputed fake inquest — held after instead of previous to embalment — and the, perhaps over-criticised post-mortem, chanced to upset what was claimed to have been the plot. Later, regrettably for the State, the speedy disposition of her body by cremation, and the strewing of her ashes under the Chapel Elms at Graceland, did away most effectually with the possibility of exhumation, and put an end to further expert post-mortem evidence in the case.

What has greatly impressed me in the consideration of this famous case, and incidentally led to the presentation of this paper before this society, is the apparent want of provident care on the part of the State, displayed in the fact that there exist to-day no statutory regulations whatever, controlling the practice of cremation in Illinois. The above affair serves to accentuate the conclusion that there is pressing need of effective legal provision governing the disposition of dead bodies by cremation, as also, perhaps, of a reform of the present lax system of granting death certificates, which affords little if any protection, in a great number of cases against crime. Needless to say the

responsibility rests with the public authorities, and improved legal enactments in this State, and in the several States, should correct the want, wherever it exists, of suitable regulations governing every mode of disposing of the dead.

The Registrar of Vital Statistics of Cincinnati — in which city the total number of incinerations to July, 1901, is nearly seven hundred — writes: "We have no special rules governing cremation. Permits are issued for cremation same as for interment." Similar replies have been received from the Secretary of the Department of Health of New York, the President of the Board of Health of Philadelphia, the Superintendent of Health of Pittsburgh, the Superintendent of Health of Providence, the Health officer of Detroit, the Registrar of Vital Statistics of Milwaukee, the Commissioner of Health of St. Paul, the Health Commissioner of St. Louis, and from others. In St. Louis, however, accompanying the attending physician's certificate of the cause of death, there "Shall be a request in writing, signed by the friends or relatives, stating that they desire to have the body of the person named in the certificate cremated. When such certificate and request have been properly signed and delivered to the Health Commissioner, he shall issue a permit setting forth the facts, and giving permission for the cremation of such body."

From the information thus far cited, it is quite apparent that in most of our large cities, no special rules have been established to govern cremation; that permits for cremation and for inhumation alike, are based simply upon the attending physician's certificate of death; and that no extra precautions are taken in issuing a permit to cremate or incinerate a body, to protect the public interest against the concealment of crime.

That possible dangers are recognized, however, in a few cities and States, and legal provision made to more or less effectively protect the interests of the public, is shown from the following extracts of other replies received.

The Secretary of the Department of Public Health of San Francisco writes,

"cremation in this city and county is governed by supervisorial ordinance, which provides that all requests for permits to cremate shall be accompanied by a written statement from the attending physician certifying that there is no cause why the body should not be cremated. Secondly it is a rule of this Department that all applications for permits to cremate shall be made twenty-four hours prior to the hour of cremation. An inspector of our Department is thus given an opportunity to make any investigation that may be deemed necessary to guard against the commission of a criminal act, or the concealment of a criminal offense." Section four of the ordinance provides, that "when said report (of the inspector) is filed, and sufficient reasons are not given why cremation should not take place, the Board of Health shall issue a permit for the cremation." San Francisco furnishes about three hundred and fifty cremations per annum. In numbers this ranks it next to New York City, where on an average five hundred bodies are incinerated annually.

The Registrar of Vital Statistics of Buffalo — in which city the total number of incinerations to January, 1901, is nearly five hundred — informs me that "before permission is granted to incinerate the remains of any person, a certificate of death must be filed, the same as if the body were to be buried. In addition to this certificate, the Department requires an affidavit of the attending physician, or of the coroner, that he has inquired into, and is familiar with the circumstances and cause of death, and that he is satisfied there exists no reason why the body should not be cremated (or incinerated). This affidavit is required in every instance, and sometimes causes delay when the body is shipped from abroad."

There is little question that the methods in vogue in San Francisco, and in Buffalo, respectively, of requiring twenty-four hours' notice and an affidavit of the attending physician, are steps in the right direction, but that they do not go far enough in the protection they afford the community, becomes apparent after the reading of either the Massachusetts

or the Connecticut law. The Buffalo rules could be made much more effective by requiring the affidavit of another competent physician not related to the deceased, instead of that of the attending physician, setting forth that he has inquired carefully and separately into all the circumstances connected with the illness and death of the deceased, and that to the best of his knowledge and belief there exists no reason why the body should not be incinerated.

In Boston, I am informed by the Secretary of the Health Department, that "when application is made for permit for the incineration of a dead body, it is after we are in receipt of a certificate from the Medical Examiner who views the body and certifies that he has no further use for it, whereupon we grant the permit." The Massachusetts law, passed in 1885 and amended in 1886, has, in section four, the following regulations of crematories, etc. "No body of a deceased person shall be cremated within forty-eight hours after decease, unless death was occasioned by contagious or infectious disease; and no body shall be received or cremated by said corporation until its officers have received the certificate or burial permit required by law before burial, together with a certificate from the Medical Examiner of the district within which the death occurred, stating that he has viewed the body, and made personal inquiry into the cause and manner of death, and is of the opinion that no further examination or judicial inquiry concerning the same is necessary."

The Connecticut law on the subject, passed in 1897, is similar to the Massachusetts law, and, in section three, reads as follows: — "The body of any deceased person may be disposed of by incineration or cremation in this State, or may be removed from the State for such purpose. In every such case the certificate of death now required by law, shall be filed with the registrar of vital statistics, together with a certificate under oath, in cases where death results from natural causes, from the town health officer of the town where the death occurred, and in other cases from the medical examiner or coro-

ner, that he has viewed the body and made personal inquiry into the cause and manner of death, and is of the opinion that no further examination or judicial inquiry concerning the same is necessary. Upon the receipt of such certificates the registrar shall issue a permit for the cremation of such body, but in no case shall any body be cremated until at least forty-eight hours after death, unless such death was the result of contagious or infectious disease; and no body shall be received by any crematory unless accompanied by the permit provided for in this section."

It is interesting to contrast the ample protection afforded public interests by the very efficient safeguards provided under the provisions of the Massachusetts and Connecticut laws governing the practice of incineration, with the insufficient protection apparent in other States, as evidenced by the lack of statutory enactments or local ordinances regulating the process.

[In passing it may be noted that the system in vogue in many cities of Europe is in many respects a very superior one, and is to be commended particularly in the protection it affords public interests. It provides that in every case of death without exception, the uncovered dead body shall be examined by an official medical examiner or official certifier appointed for the purpose; and further that said officer must have had no professional relations with the deceased.]

The necessity for taking the cremation problem in hand, must, I think, be conceded by all who give it the slightest investigation. Some steps, certainly, should be taken toward the enactment of legislation relating thereto, that will sufficiently protect the interests of the public. If a suggestion is permissible, I should, therefore, recommend that an effort be made through the Legislative Committee of this Society — with the co-operation perhaps of the several health authorities and any others interested — to secure the passage of a law for the regulation of the future practice of cremation in this State, embodying such features of the Massachusetts and Connecticut laws, as may be deemed advisable.

BRONCHITIS OF THE SMALLER TUBES

BY CH. GATCHELL, M. D., CHICAGO.

PROFESSOR OF DISEASES OF THE CHEST AND
PHYSICAL DIAGNOSIS IN THE CHICAGO HOMŒOPATHIC MEDICAL COLLEGE.**Synonyms.**

Bronchiolitis; capillary bronchitis; suffocative catarrh.

Definition.

It is catarrhal inflammation of the bronchioles and smaller bronchial tubes.

ETIOLOGY.

Age. — Age is a most important factor in the incidence of this disease. It is confined almost entirely to the extremes of life. The exceptions to this consist of those cases that occur in the extremely debilitated, in those who have suffered from many previous attacks of bronchitis, in alcoholics, and as a complication of acute infectious diseases in debilitated subjects.

Note. — It is probable that there is no case of bronchiolitis — so-called “capillary bronchitis” — without some degree of accompanying broncho-pneumonia, and there are many cases of intermediate forms in which the inflammation involves both the medium-sized bronchial tubes, the bronchioles and the alveoli; but there are cases occurring, especially in infants and young children, in which the condition of bronchiolitis predominates to such an extent as to make of them almost a clinical entity; and although this distinction has been abandoned by some high authorities, yet for convenience of description it is still retained by others.

Constitution.

The disease occurs especially in cachectic children and in diathetic conditions; feeble, ill-nourished and rickety children are especially liable to its attacks. In such children, also, it occurs as a complication or sequel of the acute infectious diseases; measles, whooping-cough and influenza.

MORBID ANATOMY.**Bronchioles.**

The inflammatory congestion, the swelling, and the proliferation and casting off of the cellular elements and production of mucus, entirely occludes the affected tubules. The lining membrane

of the tubule is markedly injected and its lumen locked by the secretion.

Emphysema.

There may be areas of acute emphysema, the air-cells beyond the occluded tubules becoming distended with air.

Atelectasis.

Scattered through the lungs are areas of collapse. The areas vary in size, many being small. In some instances the collapse may involve the greater part of the lobe.

Alveoli.

Scattered alveoli which have shared in the inflammatory process are indicated by faint yellow areas.

Bronchitis.

The medium-sized and larger tubes show signs of catarrhal inflammation; the degree and extent varies in different cases.

Heart.

There may be overdilation of the right heart, as in other forms of bronchitis.

SYMPTOMS.

Note. — The symptoms of bronchiolitis, while related to those of bronchitis of the larger tubes, are so much more severe in degree as to make of the disease almost a distinct clinical picture.

Onset.

The oncome of the attack is gradual when occurring by extension of a previously-existing bronchitis; in other cases and in the greater number, the onset is sudden.

Chill.

The initial chill may be a distinct rigor or repeated chills; in children, a convulsion often replaces the chill.

Fever.

The range of temperature is usually high; soon after the onset it may rise to 103 degrees and 104 degrees or more, and the attack throughout may be characterized by this high temperature. If the fever moderates, the invasion of new areas of lung tissue is announced by a sudden rise. Towards the end of cyanosis the temperature falls and may even become subnormal.

Pulse.

The pulse is always rapid, varying according to the condition from 130 to 150, and it may even be so rapid as to be uncountable. It is of low tension, and sometimes so small as to be almost imperceptible.

Cough.

The cough is frequent, occurring often in paroxysms and attended by pain in the chest. Early it may be dry, and in some cases remain so throughout the attack. In the paroxysms of cough there is severe cyanosis.

Expectoration.

In some cases expectoration is absent throughout the attack; in others, it will be very scanty. The sputum is viscid and expelled only after severe effort and cough.

Sputum.

In character the sputum — when present — is mucous; and later, it is mucopurulent. The mass contains fine, short plugs, which are casts of the bronchioles. These casts hang down under the lower surface of the mass when the expectorated matter is made to float on water.

Respiration.

The breathing is always rapid, and severe dyspnea is characteristic. The number of respirations, according to the severity of the attack and the amount of lung tissue involved, will vary from 30 to 60 per minute, or in extreme cases, the breathing becomes quick and panting; sometimes it goes on to asphyxia. The respirations are short and quick, and aided by the muscles of respiration. Orthopnea occurs early. With deep cyanosis and the approach of a fatal issue, the cough subsides.

Skin.

There is pallor and a high degree of cyanosis. The face is livid and the lips purple.

Perspiration.

The skin is usually moist, sometimes there being profuse sweat.

Nervous Symptoms.

Early there is much restlessness, the patient tossing about. Later, as the

blood becomes carbonized, there is lethargy, the patient showing great apathy; this may be accompanied by muttering delirium. In fatal cases, near the end, there is usually coma.

PHYSICAL SIGNS.

Inspection.

When obstruction to the entrance of air into the alveoli is great, with effort at inspiration, there is sinking in of the supraclavicular spaces, and recession of the lower intercostal spaces, and of the epigastric and hypochondriac regions. Strained effort at respiration with increased action of the thoracic muscles and also the abdominal muscles is revealed. The pallor and cyanosis of the skin are seen.

Palpation.

If there is accompanying catarrh of the larger tubes, rhonchial fremitus may be felt. Vocal fremitus is little changed.

Percussion.

The percussion note may be unchanged; over emphysematous areas it will be hyper-resonant. Over extensive areas of pulmonary collapse there is dulness.

Auscultation.

The respiratory murmur is usually harsh and rough in the upper and anterior parts of the chest; at the bases and the back it is feeble.

Adventitious Sounds. — The characteristic sounds are crepitant rales — hissing in character; there are also fine mucous rales. The rales are most abundant at the back and at the bases of the lungs. Sibilant and sonorous rales may be present, especially at the upper and anterior parts of the chest.

COURSE AND DURATION.

In young infants a severe attack may end fatally in 24 hours; in other children it is usually more prolonged. In adults, when the disease is progressively worse, the fatal termination may come in four or five days. In the aged, again, as in infants, early fatal termination may also be expected. On the other hand in the class of cases that go on to recovery, the severe symptoms may persist for about a week before signs of improvement are shown; but even after this, the course of

the disease is usually prolonged before complete convalescence is established. This is especially true in subjects of emphysema.

Bacteriology.

The specific micro-organisms found are the streptococci, the staphylococci, micrococcus lanceolatus (bacillus pneumoniae).

PROGNOSIS.

Unfavorable Signs.

Increasing dyspnea with accompanying cyanosis, indicating non-aeration of the blood, is a sign of greatest gravity. Other signs and conditions calling for guarded or grave prognosis are: — Infancy and extreme old age; increasing weakness and frequency of the pulse, with weakness of the heart action; sudden rise in temperature; coexistence of Bright's disease, emphysema and heart disease; in infants, rickets or other diatheses; in old age, arterio-sclerosis, or general debility.

The signs of approaching fatal termination are: — Increasing dyspnea, with cyanosis, delirium and coma. The respiration gradually ceases, with loud mucous rales in the chest; the patient sinks down with the head low and bent forward.

Favorable Signs.

As convalescence approaches, there is less dyspnea and cyanosis; the pulse becomes larger in volume and less frequent; the temperature gradually subsides; the tongue clears and the physical signs become less intense.

Sequels.

The attack may be followed by broncho-pneumonia, tuberculosis, or emphysema.

DIAGNOSIS.

In making diagnosis consider the age of the patient, the predisposing and exciting causes, the high degree of dyspnea following the onset, the widely distributed fine rales, and, with these symptoms, the retraction of the epigastrium and hypochondrium with inspiratory effort.

DIFFERENTIAL DIAGNOSIS.

Broncho-Pneumonia.

If dulness on percussion is absent, as it may be in some cases of broncho-pneu-

monia, it is difficult to make a distinction between the two diseases. Moreover, the two conditions are often associated and the general symptoms are similar; dependence will have to be placed chiefly upon the physical signs.

Acute Military Tuberculosis.

In this disease the onset is usually gradual; there is emaciation and general signs of tubercular affection of the cerebral meninges or of the abdominal organs. If there is expectoration, examination for bacilli will determine the nature of the attack.

Lobar Pneumonia.

In this condition the physical signs determine the diagnosis.

Pulmonary Edema.

This condition being secondary to cardiac or renal disease, will suggest the examination of those organs.

TREATMENT.

General Measures.

Fomentations. — Hot fomentations may be applied to the chest when there is oppressed breathing. Do not use them constantly. Avoid the use of poultices. Turpentine may be added to the fomentation.

Sick-room. — Provide for good ventilation. Do not let a number of people crowd around the little patient. Keep the air moist. The temperature should be 70 to 75 F.

Bathing. — The child can be placed in a hot bath for a few minutes, then taken out and wrapped in a soft blanket; this sometimes has very good effect.

The Patient. — When there is cough with much expectoration, lower the head and shoulders so that gravity will favor the removal of the secretion.

Therapeutics.

The medicines should be selected according to indications already given under "Acute Bronchitis." Tartar emetic is chiefly to be relief upon, being indicated by the abundant secretion of mucus, which it is difficult to raise. In the early stage, that of congestion, Belladonna is the leading remedy. See also indications for Veratrum alb., and especially Ammonium carb.

SELECTIONS

CHRONIC GASTRITIS.*

REPORT OF A CASE BY DR. CHAS. J. POLLARD
PRINCETON, KY.

Chronic gastritis is a condition of the stomach almost daily met with in this country in a more or less well-developed form, and to successfully treat these cases as they come to us is a goal we all desire to reach.

This disease is almost invariably associated with more or less indigestion manifested by many protein symptoms and accompanied by more or less active vomiting of the ingested materials.

The gastric secretions are almost without exception abnormal, many fermentative changes taking place in stomach contents, thus necessitating lavage more or less frequently for its relief.

The report and treatment of the following case, while not strictly in accord with true homeopathic prescribing, perhaps, was so prompt in effect and has proven so lasting in results that I shall be willing to shoulder any censure that may be heaped upon me.

On May 21, 1900, Mr. H. came to me from an adjoining county and applied for treatment, having been through the hands of two old school physicians, in the last four years.

His age, 57; average build, lean, languid, dull, expressionless eyes, coated tongue, dirty, sallow colored skin, gave history of indigestion for last four years, characterized by eructations of sour materials, pain after eating, nervous depression, sleepless nights, constipation alternating with occasional attacks of diarrhea, vomiting, not marked, loss of flesh, weak pulse, flabby muscles, in fact, a typical case of gastric catarrh in its chronic form.

From the history of treatment and the many symptoms pointing to the drug, I prescribed *nux vomica* and diluted mu-

riatic acid after meals, believing the digestive fluids deficient in quantity. The patient reported some improvement in two weeks, his medicine was repeated, and he was cautioned about diet, as formerly.

He reported again on the 21st of June, 1900, and gave history of an attack of rheumatism one week before, but still improving slowly of his stomach trouble.

In the meantime I had been studying this case arduously, I read of a case having been successfully treated with hydrozone and glycozone, then I concluded to use these as adjuvants when patient returned.

Owing to impossibility of regular lavage, I furnished patient with two ounces of hydrozone and directed him to add one ounce to a quart of sterilized water and take half a tumblerful half an hour before meals.

This, you will perceive, would procure a clean surface for the oncoming meal, though for the first few days it produced some discomfort he said from accumulation of gas.

Immediately after meals he was ordered to take a teaspoonful of glycozone in a wineglassful of water.

The next report was the 16th of July, when the improvement was very marked in his general appearance; patient was then able to eat without any dread of pain or discomfort.

Prescription was repeated and by August 1st all signs of any lesion of stomach had disappeared. Patient claimed to be well for the first time in four and one-half years. Treatment was discontinued of course. I saw this patient recently and he had practically no trouble since last August.

Dr. Finlay Ellingwood, in his excellent *Materia Medica*, says glycozone is one of the best manufactured products of the present time in its action upon enfeebled disordered stomachs, especially if there is ulceration or catarrhal gastritis.

It is a most efficient preparation and I shall use it freely in the future.

* Read before the meeting of Kentucky State Homoeopathic Medical Society, May 29, 30, 1901.

From the Monthly Homeopathic Review.

THE PROGRESS OF "RATIONAL" MEDICINE.

BY R. E. DUDGEON, M. D.
LONDON, ENGLAND.

The Annual Meeting of the British Medical Association has a never-failing interest for me. Though, as a follower of the method of Hahnemann, I am precluded by its laws from becoming a member of that august confederation of orthodox practitioners, and therefore unable to hear the brilliant eloquence of its eminent pundits, I can always enjoy the reading of their matured wisdom in the pages of its organ — The British Medical Journal. What particularly delights me is the annual Address on Medicine, delivered by some member chosen for his reputation as an experienced and skilful physician, and as one conversant with the latest developments of medical science. The orator for this year was Dr. James F. Goodhart, who is richly endowed with all the qualities required of an ideal exponent of the state and progress of modern medicine. Since the last meeting of the old century, we have entered on the first year of a new century — at least this is the general idea, though some scientists, as for example Lord Kelvin, will have it that last year was the first year and this year the second of the new century. At many meetings in past years there have been great jubilations over the wonderful progress medicine has made in these latter days and the advantages that have accrued to the sick from the recent discoveries made by the untiring labors of the industrious researchers into the mysteries of disease. I looked forward with eager anticipation to find in the Address on Medicine of the present year an account of the vast progress in the treatment of disease proclaimed by many of the most illustrious speakers and writers on medical matters, not only members of the profession but distinguished non-medical persons who have been invited to give their opinions on medical matters. Among those of the latter class, I may mention the Right Honorable Arthur Balfour, who, when presiding over a banquet given by the Medical Graduates' College, had no

doubts — philosophical or other — of the great progress made in medical and therapeutical knowledge, and the beneficial effect the researches of this particular college would have on the health and life of the community.

The annual Address in Medicine at the great Association meeting gives a fine opportunity for displaying to the world in full detail the vast progress made by medicine during the past year, so often boasted of and vaguely alluded to in less pretentious meetings and in the periodical medical literature. I accordingly turned to the report of Dr. Goodhart's eloquent address in order to learn precisely the gains of medical science during the past year. But alas! I could discover nothing in it to justify the boasts with which we are all familiar. He commences by recommending individualization of cases in treatment, which would imply that this is very much neglected in ordinary practice. As this individualization was insisted on by Hahnemann in all his writings, and is accepted as a *sine qua non* by all his followers, it must please us to observe that our colleagues of the old school are now beginning to realize its importance, but that they require to be reminded of it shows that it is still far from having obtained general acceptance in their practice. He next dwells on what he calls "the vitality of life," that is to say, the power of life to preserve itself even in "a very weakly flesh." He then dwells on "the difficulties of medicine." "A body so composite as ours is," he says, "so very delicate a machine that there must be many and many a case presented to us where we do not, many even where we cannot, know what is the matter, and taking even the most favorable view of the progress of scientific discovery, it is probable that this will be so till time shall be no longer." This is a sad confession from the school which boasts that the art of diagnosis has attained to such perfection that we are now able to tell with certainty "what is the matter" in every case. But it is still worse when we come to treatment, for "even when we have got at the facts we cannot be sure that the remedies will get at the dis-

ease." Where scientific or rational medicine comes in with all this uncertainty of diagnosis and still greater uncertainty of therapeutics, it would be hard to tell.

The remainder of Dr. Goodhart's address is a stinging satire on the actual practice of modern therapeutics. The physician knows little or nothing about what is going on "in the recesses of our impenetrabilia;" but if he show the slightest hesitation about the diagnosis of the disease, in place of getting, as he ought to do, all the patient's sympathy, he only meets with the derision of his patient. The patient "wants to know what is the matter with him when it is not possible to tell him; moreover, he will have an answer, and if not he thinks the doctor an ignoramus and calls in someone else." "Any fool can give a name to a disease." But even if the doctor should give the right name to the disease, it does not follow that he will give the right medicine. "It is told of the late Sir William Gull, that, upon a doctor excusing himself for not having discovered the existence of a particular disease he (Sir W.) remarked that it was as well he had not done so, for if he had he might have treated it."

Consultations Dr. Goodhart sneers at. He thinks "that the education of every member of the medical profession at the present day is so high," that he is as likely to form a correct diagnosis as the consultant. But as he had previously told us that the difficulties of forming a correct diagnosis were so great — often insuperable — it is just as likely as not that the highly educated practitioner and the eminent consultant may both be wrong.

As regards medicines, Dr. Goodhart has not much to say. Most patients before they come to the doctor have dosed themselves well with all sorts of drugs. "Most people know all about lithia and piperazine and the respective merits of the various preparations of Carlsbad salts; they all have their own form of blue pill. They have their own special dinner pill and an aperient pill as well; they know all about podophyllin and euonymin and cascara. They take bismuth and soda for indigestion, minder-

erus spirit and Dover's powder for colds, camphor for cholera, chlorodyne for the stomach-ache," and so on. With such drug-saturated patients what is the poor doctor to do? He may know that the best thing he can do for his patient would be to cut off his drugs at once, but the patient expects and will have a prescription, so the doctor must therefore comply with the wishes of his patient against his own judgment. "Advice," by which Dr. Goodhart means directions as to air, exercise, diet, drink, clothing, ventilation, etc., is much more valuable than physic, and yet the patient is not content with that, often he won't attend to it a bit, he wants a prescription, he believes in medicine much more, probably, than the doctor who prescribes it. It does him no good, so he blames the doctor, whose "advice" he has altogether ignored. He goes from doctor to doctor, and, finding no benefit, blames the whole faculty, and most likely falls an easy prey to the alluring advertisements of quack remedies, which he swallows in large quantities. If his disease ceases in the natural course of things while taking one of these panaceas, he becomes an ardent advocate for its use and ever after swears that Bir-cham's pills are well worth a guinea a box, or Waggoner's little liver pills are valuable in an inverse proportion to their size.

Dr. Goodhart asks, "Why do we give drugs?" "Often," he answers, "not because the disease demands it, but because the patient is not happy till he gets it; too often he is not happy even then. They are sometimes given to hide our ignorance, I fear, or to mark time while we watch and wait. They are sometimes given as a gambler on the Exchange speculates in 'futures,' an enhanced reputation being the windfall that it is hoped to secure; and then we often give drugs as an experiment in the hope that they may do good."

As to the drugs themselves: "Diseases run in fashions," and so do drugs. "Their popularity is enormous, far in excess of their merits; and by and by they sink into the cold shade of neglect." "Who

does not even now remember the boom of antipyretics? A few of them remain to us for other purposes; but as antipyretics, who gives them now? . . . They were rushed for more than they were worth, and they are now buried by later booms, such as animal extracts and antitoxins, and many of these will be buried too."

Dr. Goodhart is very sceptical about the open-air treatment of consumption, and he thinks the benefits of sanatoria much exaggerated. "In proportion to the exaggerated hope will come the bitterness of the disappointment to the sick, and the discredit to us." Of course, sanatoria, unless established on a gigantic scale, can only touch the merest fringe of the world of consumptives, nor can those who have to work for the support of their families, as so many can and must do in the early stages of the disease, when alone sanatoria are useful, afford to spend months and years in enforced idleness in a sanatorium. As Dr. Goodhart says: "If the open-air treatment is to take its real place and be of any abiding value, the principles of the sanatorium must be introduced into the home." But sanatoria, though their utility is so limited, are fine things to talk about at public meetings.

Dr. Goodhart is very sceptical about the benefits to consumptives of the fashionable inhalations of antiseptics, or to epileptics of large and long-continued doses of the bromides. This, he says, "has become the routine treatment of epilepsy, and as such I think it often does a great deal of harm, and I am by no means certain that it does any equivalent good."

On the whole, Dr. Goodhart is a pronounced pessimist in regard to the medical practice of the present day. Like Balaam, he was sent for to pronounce a blessing on the medicine of the majority, instead of which he curses it altogether. And yet not altogether, for he has not quite avoided a mild belief in the microbial doctrine of disease. "It is obvious," he says, "that great discoveries have been made in the recent past, and the dawn is breaking of a still more brilliant day." We are rather too familiar

with this figure of speech in the writings and speeches of eminent representatives of self-styled rational medicine. They can't say much good of the existing therapeutics so they speak with confidence of the good time coming, which never comes, though always close at hand "in the near future." That he is thinking of the microbes is evident when he says: "I think it may be said that we are steadily working upwards to that time when much of the ~~present~~ gross disease — tuberculosis, ~~microbic~~ fevers, etc., shall be no longer." Dr. Goodhart's address was of course composed before the meeting of the Congress on Tuberculosis; but perhaps he had an inkling of what was to come then and so spoke in a very minor key of the great results to be expected from researches among the small bacteria. The Congress was not altogether a success, indeed it must have been a great disappointment to those ardent bacteriologists whose delight it was to terrify the public with the swarms of the omnipresent pathogenic bacteria, which, though so small, went about like roaring lions, seeking to devour us. Koch's announcement of the non-identity of bovine and human tubercle bacilli and his declaration that there was no need to take any precautions against the access of the bovine microbes to be the human organism, came like a bolt out of the blue, or, as some of the members said, like a bomb-shell in the midst of the meeting. Members who had come primed with new and stringent plans for warding off the attacks of the bovine microbes were aghast. The wind had been taken out of their sails by the very man who had set them all a-sailing. It will be noticed that Dr. Koch was not present at the final banquet given to the foreign members. The omission of Hamlet from the representation of the play of that name is the only parallel that occurs to me from the absence of Koch from a tuberculosis feast. Was he purposely not invited? or, being invited, did he fear to appear among his former worshippers lest they should tear him to pieces or make mince meat of him with their knives and forks? But

though Koch has pricked the formidable-looking bovine bacillus bogey and let all the sawdust run out, he still keeps up the sputum scare and says that the main cause of the propagation of phthisis is the nasty but common practice of spitting all about; so Sir William Broadbent may be reassured, his pocket-spittoons for the prevention of phthisis have not yet been sent to join Lord Lister's spray-machines in the lumber room of discarded medical inventions. Until that time comes — which may be soon — the believers in the infectious character of human sputum may address Professor Koch thusly:

"The lethal powers of milk and beef be little,
But leave us still our faith in toxic spit-
tle!"

The therapeutic nihilism advocated by Dr. Goodhart is undoubtedly a great improvement on the officious and unnecessary administration of powerful drugs, and the employment of painful debilitating measures that seem to have been almost universal up to the first half of the bygone century. I have lately been reading the Diary of Sir Walter Scott, who died in 1832, at the comparatively early age of 61. He gives an account of his incessant work, literary and legal, and his financial worries during the last few years of his life. He suffered much from rheumatism, nervous depression, intense headaches, neuralgia and dyspepsia. He dined much in public and with his numerous friends, and seems to have indulged more than was prudent in rich food and choice wines. He was constantly under the care of the most eminent medical men, by whom he was bled frequently by venesection and cupping, took frequent doses of powerful drugs, had numerous blisters and even setons, in short, this weak, worried, nervous, dyspeptic valetudinarian, in addition to his natural diseases had to bear up against the incessant artificial diseases inflicted on him by his eminent medical advisers. Here was a case which would have profited by "advice" (as Dr. Goodhart calls it), instead of medicines, at

least of such medicines as were customary in his day. No medical practitioner would practice, and no patient would submit to such treatment as was held to be right in the first half of the nineteenth century. The beneficial change in medical practice by which the patient world has profited so much is entirely due to the teaching and example of Hahnemann and his followers. Though the effect of this teaching and example has hitherto been mostly of a negative character on the old school, causing them to abandon their severe, painful and harmful methods, they have still much to learn respecting the action and therapeutic uses of medicine. They have, indeed, appropriated many of the most valuable medicines introduced by the homeopathic school; but they are unable to obtain the full value of them, for they persistently refuse to employ them according to the therapeutic rule taught by the illustrious Hahnemann, and now practiced by many thousands of legally qualified practitioners throughout the whole civilized world.

Though disappointed at not finding in Dr. Goodhart's address any justification for the frequent boasts of his school of the vast progress effected in medical practice during the past year, there can be no doubt that the address is replete with common sense and will well repay perusal.

Diet in the Convalescence of Typhoid.

Dr. E. C. Seufert, in the New York Medical Journal, formulates his method of diet for the convalescent typhoid. We reproduce it below:

When the temperature returns to normal, about the end of the fourth week, the patient becomes ravenously hungry, so that it is sometimes difficult to prevent them from stealing solid food, or from obtaining it by working on the sympathy of friends. In severe cases, no solid food of any kind should be allowed until the temperature has remained normal for ten days. In the milder cases, where there has been little gastric catarrh and the digestion is good, we can begin solid food two or three days earlier. It is best to begin with as light food as possible, and

then allow a little more each successive day. My cases were allowed a diet somewhat like the following :

First Day. — One or two cups of chicken broth and one milk toast.

Second Day. — Home-made beef tea, a cup of weak tea or coffee, and a biscuit.

Third Day. — A soft-boiled egg, cream toast, and a little scraped beef in soup.

Fourth Day. — Two or three soft-boiled eggs, rice pudding and a baked potato.

Fifth Day. — A small piece of chicken breast, a baked apple, and one or two baked potatoes.

Sixth Day. — A small piece of tenderloin steak, mashed potato, bread and butter and rice pudding.

On the seventh day, the patient was allowed to select his diet from the previous six days ; after that he was allowed anything he wanted except fried and fat foods. If eating caused distress, the diet was immediately reduced for a few days longer.

A further caution is necessary regarding the quantity of food that is given to the patient. However bland it may be, if the patient overeats there is liable to be an undigested residue which will cause irritation, inflammation, and a possible relapse. It is better to keep the patient unsatisfied than to commit this error.

Pyemia Following Suppuration of Bronchial Lymph Glands.

The first was that of a woman of 21, who was brought into the hospital almost unconscious, with dyspnea, a rapid, weak pulse, and the signs of bronchitis. There was albuminuria, and the diazo reaction was positive. The temperature continued to rise ; intense headache, stiffness of the neck, and vomiting set in. A diagnosis of tuberculous meningitis was made, but at the autopsy the following lesions were found : Purulent, basilar meningitis, and metastatic abscesses in the brain and spleen ; tuberculosis of the apex of the right lung, of the bronchial lymph-glands, and of the left kidney ; and suppuration of a bronchial gland. This gland was situated behind the bifurcation of the trachea, and was not connected with any bronchus ; but the mucous membrane of the

right bronchus nearest the gland was of a greenish-black color, and was retracted by adhesion to a small necrotic and calcified gland. The second patient was a woman of 23, of whose history nothing was known. At the autopsy a suppurating bronchial gland was found connected with the esophagus and the right bronchus. There were also basilar meningitis and multiple abscesses of the brain, one of which had ruptured into the fourth ventricle. In addition, a traction diverticulum of the esophagus and purulent bronchitis were found. The third patient was a girl of 17, who was brought into the hospital totally unconscious. At the autopsy a suppurating bronchial gland was found communicating with the esophagus. There was also a traction diverticulum of the latter. The brain was the seat of multiple abscesses. As to the primary cause of the suppuration of the bronchial glands, tuberculosis could be demonstrated in all three cases. In all, the lesion in the lungs was slight. This, the author believes, favors the view of Ribbert that the lungs are not the first seat of tuberculosis, but that the disease primarily affects the bronchial and peritracheal lymph-glands. In the first case, the brain abscesses were produced by streptococci ; in the second, by streptococci and staphylococci ; and in the third by streptococci. The cases are important in that they suggest careful examination of the bronchial lymph-glands in so-called idiopathic brain abscesses and meningitis.

Cases in which there is a dribbling of urine in the bed, attended by the usual disagreeable urinous smell, can be made less obnoxious by pouring some turpentine upon the sheets, where it will not touch the patient's skin. This counteracts the odor to a remarkable degree.

While crepitus is one of the most valuable methods of diagnosing fracture, it is well to remember that in many cases, as in fracture of the ribs, transverse fractures of the patella, and anywhere when there is a detachment of processes and apophyses, this sign may fail to be elicited.

BOOKS

A TEXT-BOOK OF MEDICINE FOR STUDENTS AND PRACTITIONERS. By Dr. Adolf Strumpell. Professor and Director of the Medical Clinique at the University of Erlangen. Third American edition translated by permission from the thirteenth German edition. With one hundred and eighty-five illustrations in the text, and one plate. New York. D. Appleton and Company. 1901.

The third American from the thirteenth German edition of this standard work speak a great deal for it. The book covers every subject belonging to the practice of medicine. As the author states in his preface, it gives a complete presentation of the essentials of present knowledge with regard to the various diseases, both from a scientific and individual standpoint. It contains 1,242 pages and the type, while perfectly clear and readable, is of a size to permit a great deal of matter to be included in each page. For this reason the book contains considerably more than the ordinary volume of the size. There are numerous illustrations, especially where most needed. No medical library is complete without a copy of Strumpell's latest work.

A TEXT-BOOK ON DISEASES OF THE EAR, NOSE AND THROAT. By Charles H. Burnett, M. D., E. Fletcher Ingals, M. D., James E. Newcomb, M. D. With Numerous Illustrations. Philadelphia and London. J. B. Lippincott Company. 1901.

Years ago specialists in the treatment of the eye also claimed diseases of the ear as being within their exclusive province, but of late the ear has been transferred to the nose-and-throat specialists, for the reason that anatomically and physiologically it is in close relation to these parts. The present volume recognizes this new division of subjects and presents the diseases of the ear, nose and throat very completely. The authors — Drs. Burnett, Ingals and Newcomb — are already well known to the profession, and are authorities upon their subjects.

They have jointly produced a work which covers the diseases of the organs named very thoroughly, beginning with the anatomy and physiology of each part and leading up to pathology, symptomatology and treatment. The volume contains 716 pages; it is well printed and bound, and the price — \$5.00 — places it within the reach not only of the specialists but of the practitioner. The book is well illustrated.

INTERNATIONAL CLINICS. A QUARTERLY OF CLINICAL Lectures and Especially Prepared Articles on Medicine, Surgery, Therapeutics, etc. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A. Volume III. Eleventh Series. Philadelphia. J. B. Lippincott Company. 1901.

Volume III. of the eleventh series of Lippincott's International Clinics has just reached our table. The book opens with an article on "Phototherapy after Finsen's Methods." The article is specially prepared at the request of Dr. Finsen, and it gives in complete detail this new method of the treatment of lupus and similar affections. The article is fully illustrated by diagrams of instruments and photographs of patients under treatment. At the present time it is of great interest and of especial value. The other lectures are on live subjects, giving the latest developments of medical science. It is to be observed that this work is not a review, and does not consist of clippings from journals. It is a series of clinical lectures especially prepared by leading medical authorities in all parts of the world. It is intended to give practical help to the general practitioner. It is well worth the price — \$2.00.

Special Notice.

The next issue of the "Medical Era" (Jan., 1902) will contain a continuation of the series of articles on diseases of the lungs, by Dr. Ch. Gatchell. In January "Plastic Bronchitis" and "Chronic Bronchitis" will be given. In February, "Asthma." The series will be continued throughout the year.

COMMUNICATION.

Cleveland, Ohio, Nov. 10th, 1901.

To the Editor of the Medical Era:

Dear Dr. Gatchell: May I ask you to publish this communication in the pages of the "Era?" Dr. H. C. Allen, editor of the "Medical Advance," of Chicago, in his July, 1901, issue published a false statement concerning the circumstances of my election to a Fellowship in the British Gynecological Society. Since publishing his baseless charge, finding himself in error, the editor of the "Advance," in his September issue has made the following apology:

"James C. Wood, M. D. In our July issue we stated that the application for a fellowship in the British Gynaecological Society reads: 'This form must be signed by at least three fellows of the Society, one of whom must be personally acquainted with the candidate and his mode of practice.' We learn upon inquiry in England that the 'mode of practice' above referred to may mean 'Obstetrics' or 'Gynaecology' instead of Allopathy or Homoeopathy, and that we were mistaken in our interpretation of the term. In justice to the President-Elect of the American Institute of Homeopathy, we promptly acknowledge our error, and offer the amende honorable."

I have good and sufficient evidence for the belief that the July "Advance," which contained the Annual Catalogue and Announcement of the College with which Dr. Allen is connected, was sent to fully 10,000 physicians in the United States and Canada. Since Dr. Allen's apology received but a small part of this circulation, I desire that it should go to fully as many as were reached by the original. Hence it is that I ask you to publish the above, together with the following correspondence:—

10 Upper Wimpole St.,
Cavendish Square, W.,
Sept. 23d, 1901.

Dear Dr. Blake:

In reply to your inquiry with reference to Dr. James C. Wood, of 122 Euclid Avenue, Cleveland, Ohio, and the by-law passed by the British Gynaecological Society in respect of homoeopathy, I may state that—

1. In 1890 Dr. Wood was elected a Fellow of the British Gynaecological Society.

2. In January, 1896, a by-law was passed, "That it is undesirable that any member of the medical profession practicing homoeopathy should be proposed as a Fellow of the Society." Yours very truly,

ARTHUR E. GILES.

Late Hon. Secretary British Gynaecological Society.

64 Seymour St., London, W.—Sept. 24.

My Dear Wood:

On receipt of your letter I went at once to my friend Dr. Giles, ex-Secretary of the Society. He tells me that you were elected in 1890 and that the question of Similia Similibus Curenter was never raised until six long years after. I myself can vouch for it that you made no surrender of views in getting the Fellowship.

Yours ever,

EDW. BLAKE.

The above authority should settle this matter in the mind of every unprejudiced person without further explanation on my part. Those who know me will require nothing more; those who entertain prejudice in the matter would not be convinced by any further presentation.

By publishing this in the pages of your valuable journal you will greatly oblige, fraternally yours,

JAMES C. WOOD.

When removing large grafts with a razor, for skin grafting, allow a stream of saline solution to run over the razor while cutting. This will help it to cut better, and lifts up the grafts, preventing them from adhering to the razor, and facilitates their removal.

ANNOUNCEMENT.

TO THE MEMBERS OF THE AMERICAN
INSTITUTE OF HOMOEOPATHY:—

The American Institute of Homeopathy in session at Richfield Springs, N. Y., empowered the newly-elected Executive Committee to select the place for the Institute's 58th meeting, in June, 1902.

The Committee has made choice of the city of Cleveland. We feel assured that after the meeting has taken place the members will agree that the Committee's decision is the wisest one that could have been made. In 1899 the Institute made Cleveland its first choice for the next succeeding meeting, thus recognizing its eminent fitness. The local profession now desires the meeting.

Cleveland has the advantage of being easily accessible by many lines of road from all parts of the United States. This is looked upon as being of the greatest importance in insuring a large attendance. The place of meeting must be easy of access.

The month of June in Cleveland is one of the most delightful of the year, and weather conditions are likely to be of the pleasantest. The Hollenden House — which will be headquarters — is one of the best hotels in any city in the country. It has made many concessions in the interest of its expected guests. The Hollenden has 500 rooms and will take splendid care of a large number. There are other first-class hotels near by. All can be suited and all can be accommodated.

There is a very large number of homoeopathic physicians in the part of the country tributary to Cleveland, making it a most favorable point for the accession of new members. It is many years since the Institute has met in Ohio, an additional reason in favor of the choice that the Committee has made.

It is proper to state that the Executive Committee is well aware of the fact that there is a strong and widespread sentiment in favor of a quiet "resort" for

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CH. GATCHELL, M. D.,

Editor Medical Era,
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the Institute meetings. Each member of the Executive Committee shares in this feeling. With this in view an earnest effort was made to find a suitable place of the character. The only one that presented itself was Put-in-Bay Island, in Lake Erie. After a thorough investigation the Committee felt compelled to abandon further thought of this place, for the main reason, among others, that it is very inaccessible. Boats do not always make proper connection with trains, often causing long delay. Should the lake chance to be rough, the trip is very objectionable to many people. Therefore, because of its inaccessibility, the Committee became convinced that it was undesirable to make choice of the Lake Erie island resort.

In making the above announcement of its final choice, the Executive Committee entertains the confident assurance that the meeting of the Institute to be held at Cleveland, June 17-21, 1902, will take its place among those which have been the most successful, the most profitable, and the most largely attended.

Ch. Gatchell, M. D., Sec'y-elect.
Jas. C. Wood, M. D., President-elect.



That the dead-of-the-night must be a ghost.

That "one of these days" is none of these days.

That if you believe a thing to be impossible, it certainly is so.

That woman first tempted man to eat, but he took to drink without her help.

That a truth fits every truth in the world, but a lie fits nothing but another lie.

That many people are charitable to sinners, when they happen to be the sinners.

That if other people would only be reasonable what an easy-going world this would be.

That a man who is pushed to the wall is in a favorable position to brace himself for a kick.

That there is no man who is not willing to admit that at some time or other he made a fool of himself.

That a man who is ruled by his wife is a man you can trust.

That the true man is too honest to steal and too proud to beg, so he borrows.

That a baby in a house is a well-spring of pleasure, and twins are a deluge.

That fire is a good servant if, like other good servants, it will only keep its place.

That if you are born neither lucky nor rich, you will be driven to the stern necessity of working for a living.

That anybody knows what to do with poverty, but there are very few good judges of what is best to do with riches.

That politeness requires that you should anticipate a lady's question by giving her the prompt assurance that it is on straight.

That the wayfaring man, though a fool, should not err in distinguishing between the woman who is good-looking and the woman who looks good.

MEDICAL ERA

CH. GATCHELL, M. D., EDITOR

LEADER:—COMPRESSION IN HEART DISEASE.

THIS COPY CONTAINS
ARTICLES ON

REMEDIES IN SURGICAL CASES; (page 266)
ASPECTS OF CREMATION PROBLEM; (page 268)
BRONCHITIS OF SMALLER TUBES; (page 272)

THE ARTICLES
ARE BY

DR. JAS. C. WOOD.
DR. JNO. R. KIPPAX.
DR. CH. GATCHELL.

SURGICAL ERA

CHAS. ADAMS, M. D., EDITOR.

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- 15th. Stands upon its own merits and not upon the reputation of others.

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Fig. XVII—Dorsal Position.

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I have received such great benefit from your new preparation, **Kola-Koloid**, that I cannot refrain from sending you an unsolicited testimonial. I have tried it in headache and nervous dyspepsia, and it has never failed to afford relief. For the horrible despondency attendant on nervous prostration, it is a magical remedy. It has controlled and regulated the action of an irritable heart as nothing else ever did. *Last and greatest*, I have used it for fatigue and exhaustion following overdoing, and found myself so refreshed and reinvigorated as to be ready for any new exertions. Best of all there has never been the slightest evil after effects, but a permanent gain in strength and general health.

Very sincerely yours,

R. Y. E. JOHNSON, M. D.

Pardeeville, Wis., August 12, 1895.

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Glyco-Thymoline (Kress) causes rapid exosmosis of serum from the engorged tissues; it is perfectly bland and devoid of irritating qualities and being antiseptic it is particularly advantageous in cases in which abrasion or erosion of mucosa exists, making the employment of an antiseptic desirable.

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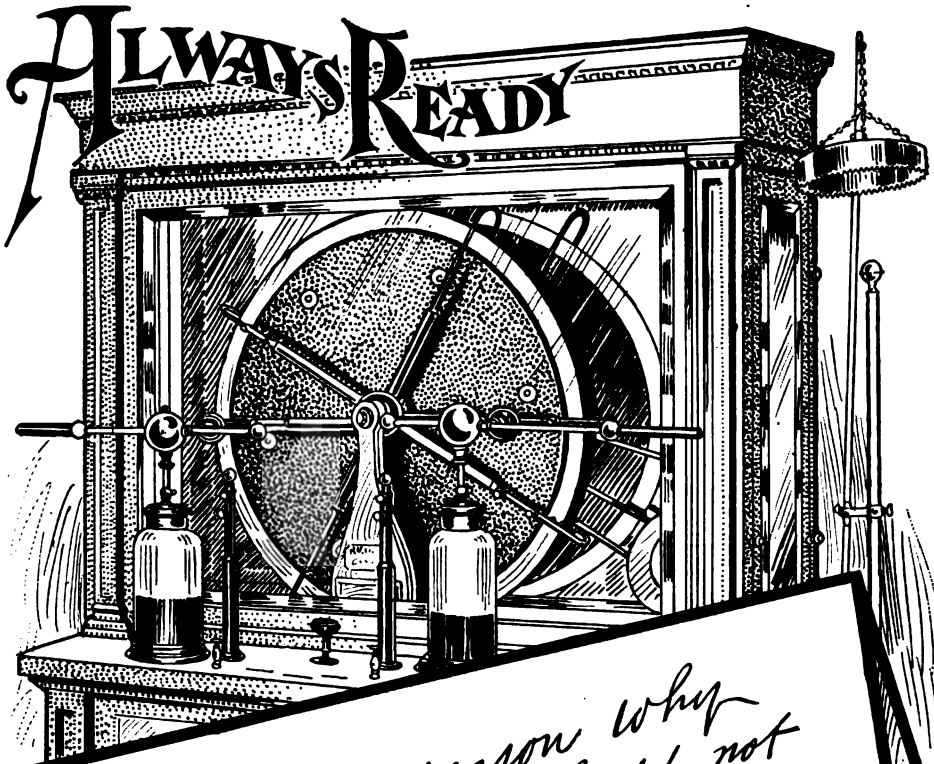
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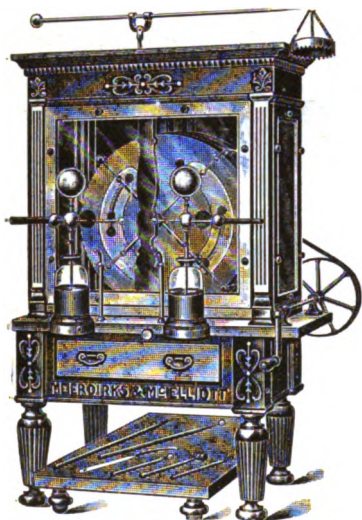
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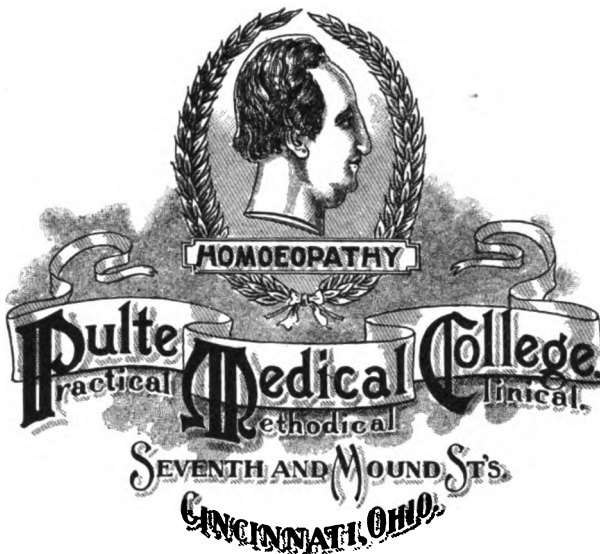
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Whole Wheat as a Food Product.

"What we eat and drink for the purpose of nourishing the body constitutes our food. When we come to analyze the various animal and vegetable foods made use of by mankind, it is found that they are all composed of one or more of five or six different classes of substances to which the name 'food-stuffs,' or alimentary principles, has been given. To ascertain the specific, nutritive value of any food, it must be analyzed and the percentage amounts of the different food-stuffs contained in it must be determined. The essential use of the PROTEIDS in the body is that they supply the material from which the new tissue is made and with which the old tissue is repaired. Inasmuch as the most important constituent of living matter is the PROTEID part of its molecule, it will be seen at once that PROTEID food is an absolute necessity. If our diet contained no PROTEIDS, the tissues of the body would gradually waste away and death from starvation would result. All the food-stuffs are necessary, but PROTEIDS are absolutely essential for the maintenance of animal life — that is, for the formation and the preservation of living protoplasm. Whatever else is contained in our food, PROTEID of some kind must form a part of our diet.

"STARCH is a carbohydrate. Its physiological value lies in the fact that it is destroyed in the body and a certain amount of energy is thereby liberated. Inasmuch as we are continually giving off energy from the body, chiefly in the form of muscular work and heat, it follows that material for the production of this energy must be taken in the food. Carbohydrates (Starch) form the easiest and the cheapest source of this energy." — W. H. Howell, Ph. D., M. D., Prof. of Physiology in Johns Hopkins University.

"The two ultimate uses of all food are these: First, to supply the body with material for growth or repair; and, Second, to furnish the system energy for action, or the capacity for doing work. Every food, therefore, can be physiologically classified as either a 'Tissue Builder' or a 'Force Producer.' The outer coatings of the WHEAT kernel, called bran, contain a large percentage of albuminous, proteid, material and of phosphates; in fact, MOST ALL of the NUTRITIVE SALTS of WHEAT are contained

in this BRAN. GLUTEN is a valuable nitrogenous food product, but it is separated in the process of making starch from wheat. In WHOLE WHEAT the GLUTEN NITRATES and the PHOSPHATES are all retained. In the finest flours, all the nitrogenous elements have been largely removed by milling. 'In the average composition of Wheaten bread, Nitrogen exists in the proportion of 1 part to 21 of Carbon.' (YEO.) Besides this deficiency in Nitrogen there is but a trace of fat in refined flour, and very little mineral matter. The WHOLE WHEAT grain contains an amylolytic enzyme, or ferment, resembling diastase, which is called cerealin. This digestive substance acts upon the starch and dextrinizes it." — W. Gilman Thompson, M. D., Prof. of Clinical Medicine in the University of the City of New York.

In the manufacture of SHREDDED WHOLE WHEAT BISCUIT the WHOLE wheat is used and every vitalizing, nutritive and constructive element originally inherent in the complete grain is retained. When you eat them you secure the benefit of every food property known, and you could obtain no more wholesome, healthful nutrition if you were to eat all the kinds of food in existence. The most natural food is the food that best nourishes every structure of the human body in just the proper proportion to its natural requirements.

SHREDDED WHOLE WHEAT BISCUIT is Sufficient for every Nutritive Need — it being a universal food-stuff. It satisfies not only the Appetite of the Palate — because it is a delightful and delicious relish — but also that normal craving of the stomach, Hunger — it being "heartly and filling."

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