Beryllium: A neglected remedy in ENT disorders

Introduction to Beryllium Metal

Beryllium is a very interesting metal. It is a naturally occurring grayish metal found in compounds in mineral rock, coal, soil and volcanic dust. In the periodic table, it is in the group IIA, series 2. Its atomic number is 4 and atomic weight 9.

It possesses some characteristics:

1. It is strong and hard
2. It is light weight
3. It is heat resistant
4. It has a very high melting point
5. It is non-magnetic
6. It is a good electrical and thermal conductor
7. It is less soluble in water
8. It requires lipid for catalytic activities
9. It is alkaline in nature
10. It acts as a mediator or messenger

Beryllium's durability, conduction and neutron moderation, make it increasingly useful in many industries, which include:

- Metal working (pure beryllium, copper and aluminum alloys, jet brake pads, aerospace components)
- Ceramic manufacturing (Semi-conductor chips, ignition modules, crucibles, jet engine blades, rocket covers)
- Electronics (transistors, heat sinks, X-ray windows)
- Atomic energy industry (heat shields, nuclear reactors, nuclear weapons)
- Laboratory work (research and development, metallurgy, chemistry)
- Extraction (ore and scrap metal)
- Dental Work (alloys in crowns, bridges, dental plates)
- Fluorescent lamp work.

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Beryllium and Toxicity

Beryllium is a toxic metal. It can reduce stores of magnesium and decrease organ function through interference with enzymes. Beryllium fumes and dust are among the most toxic substances known. WHO have classified Beryllium as a cause of cancer in humans. The environmental Protection Agency (USA) lists Beryllium as a toxic air pollutant that needs to be controlled in our communities which become contaminated with beryllium from nearby factories and mines or by uncontrolled burning of fossil fuels.

Beryllium Disease (Berylliosis):

There are two forms: **Acute Beryllium**: Disease usually has a quick onset and resembles pneumonia or bronchitis. **Chronic** one has a slower onset and is caused by allergic reaction to Beryllium. Even brief or small exposures can lead to this disease. Once a person is exposed to Beryllium, there is a lifelong risk of developing the disease. Once inhaled, Beryllium is like a time bomb in the body.

Beryllium and Environment

- Beryllium dust gets into air to the soil and water.
- It enters water from rocks and soil and from industrial waste.
- Some Beryllium compounds dissolve in water but most settle at bottom as particles.
- Beryllium particles in ocean water may take a few hundred years to settle at the bottom.
- Mostly Beryllium in soil doesn't move up the surface or into the groundwater.

Exposure to Beryllium can occur as:

i) Background levels in air, food and water are low.

ii) Breathing contaminated workplace air.
iii) Breathing tobacco smoke from leaf high in Beryllium
iv) Breathing contaminated air or ingesting water or food near industry or hazardous water sites.

Beryllium disease primarily affects the lungs, causing shortness of breath, cough, fatigue, weight loss and / or loss of appetite, fever, night sweats etc; granuloma develops in the lungs. On skin it produces poor wound healing and rash or wart-like bumps.

MATERIA MEDICA: *Beryllium*

Region	Worse	Better
Larynx	Heat. Warm room	Cold
Lungs	Motion. Slight exertion	Open air
Gall Bladder	Car riding	Warm room
Kidneys	Bending backwards	(cough)
Bones. Joints	Inspiring	Eating
Skin Lt. to Rt (mastoid)	Sight and smell of food	

Allergic. Tubercular. Lithic. Cancerous

Disturbes phosphorus metabolism through disturbed phosphatase activity.

Very acute or delayed onset. Frequent relapses; very long drawn-out recovery; very slow resolution.(All metals are sluggish and weak).

Weakness, exhaustion, soon tired; worn out; somnolence. Lypothymia (hysterical syncope) with weak legs. Emaciation with sub-febrile state.

Oedema.

Sarcoid: In axillary glands, liver, spleen, lungs, skin, bones (sarcoma; sarcoidosis).

Various growths: Granuloma; papilloma; osteosarcoma; gumma (syphilitic, tubercular, soporotrichosic); lipomas; cysts. Nodosities, localized in inter-digital articulations.

Granulomatous: Exposed tissues; focal lesions in lungs and liver.

Fainting: From cardiac insufficiency (*Lach*); hysterical.

Select Particulars

Head: Frontal headache; throbbing.

Worse: Heat, getting up, least movement, jar (eg coughing), light, excitement.

Better: Fresh air, lying on painful side. Occipital pain radiating to mastoid; or mastoid to mastoid. Shocks in Vertigo.

Eyes: Conjunctivitis with photophobia. Catarrhal conjunctivitis. Follicular conjunctivitis.

Nose: Thin, acrid coryza; fullness > open air. < warm room. Contusion - like pain within nose. Rhinitis (acute, chronic); sinusitis; spasmodic (hay fever).

Face: Pallor or cyanosis (from crude). Lips dry, cracked, small ulcers on.

Mouth: Dryness. Small ulcerations on lips and tip of tongue. Stomatitis. Gingivitis. Palatal vault has a glassy look. Lichen planus of mouth.

Throat: Pharyngitis. Better by cold drinks (*Lach*); eating. Sore throat with ulcers on tip of tongue, constant desire to swallow, swollen glands, deep cough, itchy papules on skin. Red glazed appearance. Painful burning. Must hem and hawk.

Stomach: Averse to sweets. Capricious appetite; easy satiety (*Lyc*), but soon hungry again. Anorexia, vomiting, emaciation. Nausea at sight or smell of food, car - riding; better lying down or eating (however).Travel sickness. Gastritis. (Ulcer, cancer, stenosis). Fullness before meals; full up, yet hungry (*Lyc*). Drowsy after meals, with tightness in epigastrium (agg inspiration).

Abdomen: Meteorism, painful, worse inspiring. Cholecystitis, lithiasis or non-lithiasis. Fibrocystic disease of pancreas. Chronic pancreatitis. Hepatic insufficiency;

tropical (*Pho*).Diaphragmatic (phrenic) hernia.
Urinary: A lithiasic state. Renal calculus with hypercalcemia. (Diabetes). Porphyrine increased (*Crot-h*).
Respiratory: Dyspnoea on slightest exertion, out of proportion to the physical signs. "Never seen such dyspnoea and such tough expectoration" (Griggs). Laryngismus stridulus. Inflammation chronic, tubercular. Polypi. Papillomata laryngii.
Cough: from irritation behind sternum (or pain there). Cannot cough (deep) enough, yet little expectoration. Rattling cough better in warm room, worse bending backwards, smoke. Suffocating croupy cough, sticky mucus, and intense pain behind sternum. From bursting of fluorescent tube nearby; earlier symptoms were like influenza for which *Bry, Gels, Rhus-t* were ineffective. Cough of lung cancer. Dry, deep, painful cough.
Expectoration: sweet; tough; not rusty; blood-streaked. Constriction of chest from exertion, inspiration. Burning of knife-like pains behind sternum. Bronchitis. Bronchiolitis. Tracheo-bronchitis. Bronchiectasis. Emphysema. Cardiac asthma.
Pneumonia: Influenza-pneumonia or pneumonia after measles or pertussis. Chronic interstitial pneumonia. Atypical and viral pneumonia.Pneumoconiosis. Sarcoids in lungs (*Nat-a*); early T.B.
X-ray shows: "Snow-storm" like picture as in miliary TB or intense infiltration. Multiple areas of soft tissue infiltration, later leaving a nodular appearance (tubercles). Images of tuberculosis or of sarcoidosis. Laryngeal phthisis.
Heart: Palpitations, and sensation of thoracic constriction. Angina pectoris. Arrythmias. Rheumatic myocarditis. Senile heart. Burning retro-sternal pain.
Back: Stitching pains in mid-dorsal and lumbar regions worse lying down, beginning of motion (*Rhus-t*), bending head forward. Cold sensation in dorso-lumbar and gluteal regions. Osteophytic (exostosic) lumbar rheumatism.
Locomotor: Weakness and lameness of limbs. Pains as if sprained arm. Blue hands. Clubbed fingers. Osteoarthritis.
Skin: Cutaneous and subcutaneous granulations with formation of fistulae. Sarcoid. Ulceration of skin, leading to subacute granulomata (from poisoning). Papillomas. Small hard papulae, nodular, surrounded by areas of erythema (poisoning).Itching papulae worse warmth of bed, scratching. Papulo-vesicular dermatitis. Contact dermatitis. Polymorphous dermatitis. Oozing secretions and fissures. Eczema. Lichen planus in mouth.
Thermic: Lowered temperature (from poisoning). Feverish horripilation. Chilly, worse from exertion; warmth; in bed at night; beginning of influenza, symptoms like *Rhus-t*.
Relations: Similar to *Alum*.
Compare: *Bry*: Aggravation by movement, dry and painful cough.
Lach: Swooning, out of cardiac weakness, suffocation, tearing dry cough.
Also Compare: *Barytas, Calcareas, Kali-c, Lyc, Magnesiums, Nat-ars, Phos, Puls.*
Baryta is inimical to *Beryllium.*

COMMENTS

Beryllium is a syco-tubercular remedy of wide dimensions. It meets the civilized life of today where air pollution has tremendously increased due to industrial growth. Today, no one can deny the role of air pollution in upper and lower respiratory tract disorders. A substantial number of children today suffer from respiratory disorders like rhinitis, bronchitis, pneumonina, asthma etc and *Beryllium* must not be neglected in view of its potentiality. For those who live in industrial zone, *Beryllium* may also be given as an intercurrent. It, thus, parallels *Sulphurous-acid.*
Beryllium is often a neglected remedy in ENT disorders. It can be a remedy of choice in rhinitis, acute or chronic. However, the cold which begins as thin, acrid flow, doesn't restrict itself to nose and travels either in the upper zone causing rhino-sinusitis or in the lower one causing bronchitis or pneumonia. In recurrent laryngeal papillomata, it is a sheet anchor. I often use it

when there is a partial response to remedies like *Calc-carb, Calc-p, Calc-f, Thuja* or *Silicea.* In a patient who has chronic pathology in lungs and who presents with spasmodic, suffocating cough, *Beryllium* must be thought of. I have often found it useful in COPD patients who develop exhausting bouts of cough. It should be compared with *Stannum-met.* ❑

Ammonium-mur. A useful medicine in ENT

The action of *Ammon-mur* in the sphere of nose and throat has been very much evaluated in the homoeopathic literature. J H Clarke mentions about the characteristics of *Ammon-mur* in his dictionary of Materia Medica, "Coryza, acrid, watery, scalding hot, with chilliness between shoulders. Loss of smell. Cough and asthmatic symptom < in the open air".

TO READ FURTHER UNDER THE HEADING NOSE
Swelling of the nose.
Painful sensibility to touch with pain of ulceration and bloody crusts in the nostrils. Sneezing, with shooting in the nape of the neck radiating to shoulders, with crawling in the throat; Coryza, with blockage of nose - with tenderness and loss of smell and flow of clear acrid Coryza, corroding the lips.
"Mouth-burning blisters on tip of the tongue with shooting pain in the throat on swallowing. Tenacious mucous in the throat, mainly in the morning. Swelling of tonsils so he can scarcely swallow after taking cold."
Nash has not mentioned anything about its influence on the throat and respiratory organs in his LEADERS IN HOMOEOPATHIC THERAPEUTICS.
BOERICKE IN HIS POCKET MANUAL OF HOMOEOPATHIC MATERIA MEDICA says All mucous secretions are increased and retained. It is especially the fat and sluggish patients who have respiratory troubles. Cough associated with catarrhs and affection of liver. Throat: Internal and external swelling of throat with phlegm, so viscid, it can not be hawked up. Tonsillitis. Respiratory: Hoarseness and burning in larynx. Dry, hacking, scraping cough; worse lying on back or right side. Stitches in the chest. Cough loose in the afternoon, with profuse expectoration and rattling of mucus oppression of chest burning at small spots in chest scanty secretion. Cough with profuse salivation.

ACCORDING TO E A FARRINGTON: Like the carbonate, it produces violent inflammation of mucous membranes. Beginning with the nose, we find that it causes coryza. The nose is "stopped-up" more at night than in daytime. One nostril is usually stopped-up at a time. There is an excoriating, watery discharge from the nose, which makes the inside of the nostrils and upper lip sore. The throat is swollen so that the patient can not open his mouth. The mouth and throat are filled with viscid phlegm, which the patient expels with great difficulty. There is throbbing in the nostrils. This is characteristic of *Ammonium-mur.* It is a symptom which may suggest it in tonsillitis or in scarlatina when the faucial symptoms are so severe as to produce almost complete strangling.
The chest symptoms are by no means unimportant in *Ammonium-mur.* We find a cough which may accompany the foregoing symptoms or which may be separated from them. The cough is very violent and seems to excite the salivary glands, for during it the mouth fills with saliva. Hoarseness, with burning and rawness in the larynx, necessarily belong to such an acrid remedy as *Ammonium-mur."*

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