



Homoeopathic Medicines can kill bacterias

ABSTRACT: The purpose of my research was to show the effectiveness of Homoeopathic remedies over bacteria by using the modern techniques for the better understanding of the power homoeopathic drugs and to broaden spectrum of homoeopathic drugs.

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INTRODUCTION

Modern science has many methods for standardization of the drugs. For antibiotics they use the "Drugs sensitivity" ie KIRBY-BAUER TEST for Antibiotic Susceptibility. This test is used to know which drug is capable to kill the bacteria out of body and in which dose in milligrams. And then they determine the drug sensitivity and try their drugs on animals (guinea pigs). And afterwards human clinical trails were taken.

But in Homoeopathy things are different. Here we know that Homoeopathic remedies act dynamically and so we are unable to show their action technically. This research is my sincere effort to show how Homoeopathic remedies can kill bacteria.

OBJECTIVES

- 1 To prove Homoeopathic drugs can act in vitro.
- 2 To prove action of different potencies of same drug is different.
- 3 To determine the susceptibility of the strains of Staphylococcus-aureus species to *Arnica* and *Calendula*.

ARNICA-MONTANA

Arnica is the king of traumatic remedies. This drug is much beneficial in the most of the severe wounds by bullets, Hunt weapons, also trauma and injury due to fall.

ACTIVE PRINCIPLES:CHEMICAL CONSTITUENTS

The main alkaloid is Arnicin, which is bitter in taste and acrid having yellowish colour. It also contains Arnicinic-acid, tannin and insulin.

MECHANISM OF ACTION

The sesquiterpenoid lactone helenalin and, to a lesser degree, the sesquiterpenoid lactones 11 alpha, 13- dihydrohelenalin and chamissonolid are reported to inhibit the activation of the transcription factor NF-kappa B by directly modifying this factor. Activation of NF-kappa B leads to inflammatory and analgesic actions of topical *Arnica* preparations.

The sesquiterpenoid 7-hydroxy-3, 4-dihydrocadalin and 7-hydroxycadalin-have been reported to have activity against Gram-positive bacteria, including methicillin-resistant Staphylococcus-aureus (MRSA). The mechanism of this antibacterial activity is unknown.

IMPORTANT CHARACTERISTIC FEATURES

INJURY- *Arnica* is very useful when the injury is from a blunt instrument, fall, blow, trauma, contusion etc. It is also useful for recent or remote mechanical injuries even if received years ago. Sore, lame, bruised feeling all over the body as if beaten. The affected parts become bluish and blackish with extravasations of blood. Very painful and sensitive to touch. Compound fractures are with profuse suppuration.

Meningitis may occur after mechanical or traumatic injuries. Soreness, swelling, inflammation and paralysis of ocular muscles with diplopia. Haematemesis with sore, bruised feeling after blow on the stomach.

Many books of Materia-medica mention that "External application where skin is not broken; in blunt

injuries, as external application in the form of ointment or in liquid form". But I use, since many years, as external application in open wounds with great results.

Internally 1M potencies are useful to prevent scar after surgery especially after plastic surgical and first aid for such type of conditions.

CALENDULA-OFFICINALIS

It was the commonest used medicine in the 16th century. It is a great homoeopathic remedy as an antiseptic for wounds. It can be used externally with wonderful results. It is homoeopathic surgical and first aid for such type of conditions.

ACTIVE PRINCIPLES (CHEMICAL CONSTITUTES)

It contains traces of volatiles oil, a bitter principle and calendulin, which is tasteless substance.

IMPORTANT CHARACTERISTIC FEATURES

INJURY: It is a very good medicine for surgical operation, amputation. It is also useful in lacerated wounds, during labour, fracture of bones, clean cut injury, extraction of teeth.

External wounds with or without loss of substance, for post surgical operation, torn and jagged-looking wounds; it promotes healthy granulations and prevents excessive suppuration and disfiguring scars. It is of special use in such injuries as gunshot wounds. It is invaluable remedy in gynecological practice.

It is used for all cases of loss of parts, rupture of muscle or tendons, wounds penetrating articulation with loss of synovial fluids, laceration and perineal tear during labour. Patient becomes exhausted from loss of blood. Pain is excessive, idiopathic and traumatic neuronal. Hot calendula fermentation is better in case of abscess also hot calendula lotions are generally preferable to cold one.

ETHYL ALCOHOL

This is the main vehicle used in homeopathic drugs. It is generally obtained by fermentation of sugar by yeast. The alcohol is separated by simple distillation. It is a colorless, volatile and inflammable liquid.

PHARMACOLOGICAL ACTIONS: Local action depends on the concentration of alcohol and the tissue to which

it is applied. Because it evaporates quickly from the skin, it has a cooling and refreshing effect and is used for reducing temperatures in fevers. Eau-de-cologne and after shave lotion are the other examples of cosmetics preparation for their cooling effect.

In concentration of 40 to 50% it has a mild irritant action. Higher concentration denature proteins by partial precipitation and dehydration; in such it acts as an astringent, a germicidal and irritant.

Concentrated alcohol if injected, produces tissue destruction. Homoeopathic drugs are not suitable for injection (IM or IV, subcutaneous) because they contain 40 to 99 % of alcohol. But homoeopathic drugs can be used for injection after using a suitable vehicle eg benzyl alcohol.

Alcohol in concentration of 70% by weight acts as an antiseptic; the action is seen only against vegetative forms of organisms; spores are resistant. A cotton swab rubbed on the skin kills 90% of bacteria in 2 min.

METHODOLOGY: The most commonly antiseptic drugs used in homoeopathy are *Calendula* and *Arnica* were selected for selected for the project. A *Staphylococcus-aureus* bacterium is selected sensitivity test against homoeopathic drugs.

Applying discs containing measured amounts of antibiotics, this will diffuse out.

Method using paper discs containing different Antibiotics or different concentrations of one antibiotic.

AGAINST STAPHYLOCOCCUS-AUREUS

STAPHYLOCOCCUS-AUREUS (ATCC 25923)

Staphylococcus-aureus are gram positive bacteria that occur in grape like cluster. They are ubiquitous and form the most common cause of localized suppurative lesion in human beings.

MORPHOLOGY: They are spherical cocci, approximately 10m in diameter and arranged characteristically in grape like cluster. They are non motile and non spore forming. They are coagulase positive ' hemolysis on blood agar.

Staphylococcal diseases

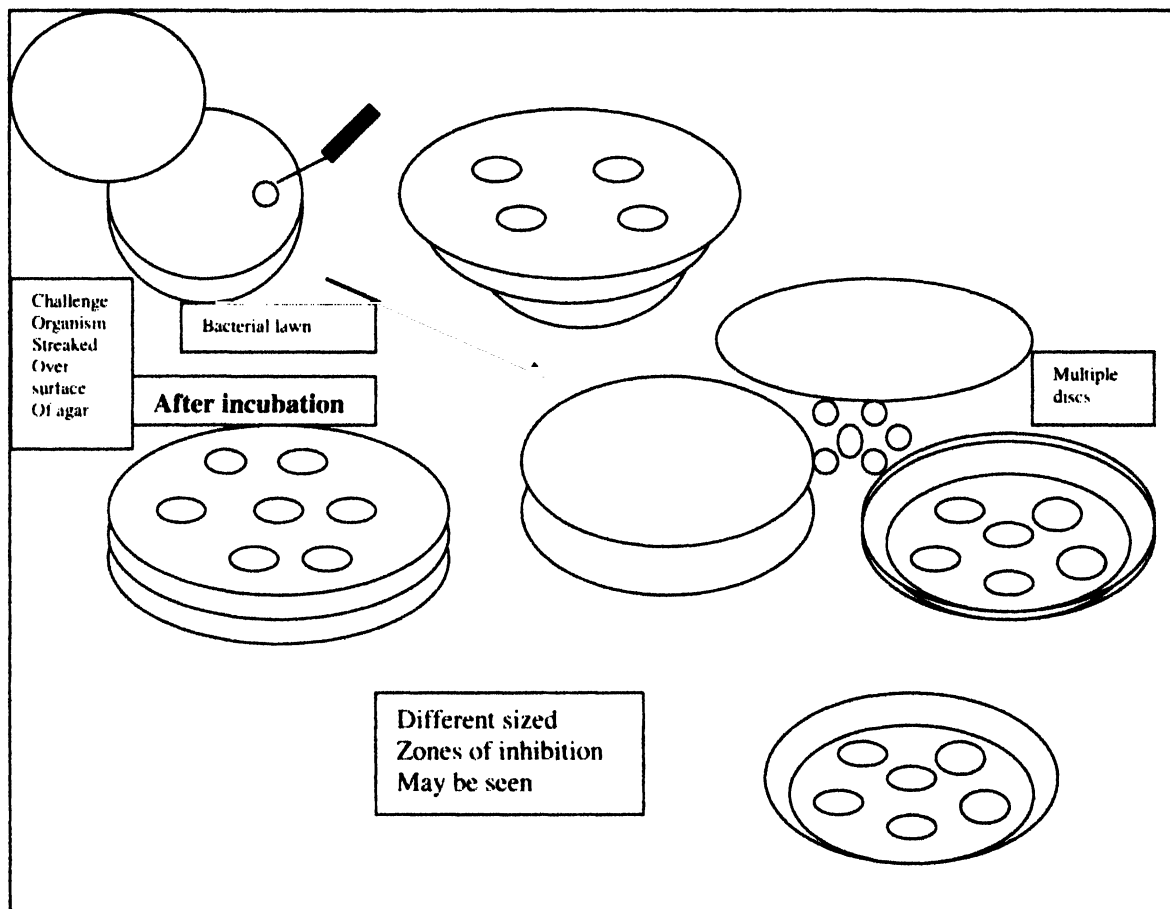


Staphylococcal infections are among the most common of bacterial infection and range from the trivial to the fatal. Staphylococcal infections are characteristically localized phylogenetic lesions common Staphylococcal infections are as follows: folliculitis furuncle (boil) abscess (particular breast abscess) wound infection, carbuncle, impetigo, paronychia,

osteomyelitis, tonsillitis, pharyngitis, sinusitis, otitis media, broncho-pneumonia, lung abscess, septicemia etc.

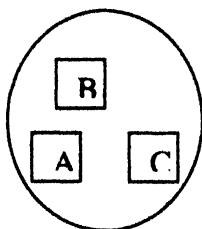
Here the aim is to evaluate which potency is suitable for treatment.

Potency used are: Mother tincture, 30, 200 and 1M



KIRBY- BAUER TEST for Antibiotic Susceptibility:

The disc diffusion test, is a standard that has been used for years



The basics: The bacterium is swabbed on the agar and the antibiotic discs are placed on top. The antibiotic diffuses from the disc into the agar in decreasing amounts the further it is away from the disc. If the organism is killed or inhibited by the concentration of the antibiotic, there will be NO growth in the immediate area around the disc: This is called the zone of inhibition. The zone sizes are looked up on a standardized chart to give a result of sensitive, resistant, or intermediate. The Mueller-Hinton medium being used for the K-B is very high in protein, in particular.

THE PROCEDURE

1. Subculture was done on nutrient agar.
2. It is incubated 37° C for whole night.
3. Swabbing is done on date a Mueller-Hinton plate with Staph isolate (using the 18 hr old broth culture).
4. Placing of antibiotic disks on the agar done.
5. The Antibiotic Disks.
 - ° Subculture isolate is incubated for 18 hours at 37° C
 - ° Disk are prepared from *Arnica* and *Calendula* mother tincture, 30,200 and 1M
 - ° Incubation at 37° C for 48 hours is done so that effect of alcohol will not remain.

INTERPRETATION

- It is done after 48 hours.
- Place the metric ruler across the zone of inhibition, at the widest diameter, and measure from one edge of the zone to the other edge. Holding the plate up to the light might help.
- The disc diameter is actually to be part of that number.
- If there is No zone at all, report it as 0 even though the disc itself is around 5mm.
- Zone diameter is reported in millimeters, looked up on the chart, and result reported as S (sensitive), R (resistant), or I (intermediate).
- Recorded results on table are shown below. Drug used are of SBL private limited, A-3 site Sahibad, Ghazibad- 201010.

RESULTS

Drugs and its potency	Zone dia	S, R, I
<i>Arnica</i> MT	11 mm	S
<i>Arnica</i> 30	9 mm	I
<i>Arnica</i> 200	7 mm	R
<i>Arnica</i> 1M	9 mm	I
<i>Calendula</i> MT	9 mm	I
<i>Calendula</i> 30	9 mm	I
<i>Calendula</i> 200	8 mm	I
<i>Calendula</i> 1M	10 mm	S

DISCUSSION

The purpose of my research was to show the effectiveness of Homoeopathic remedies over bacteria by using the modern techniques for the better understanding the power of homoeopathic drugs and to broaden spectrum of homoeopathic drugs.

As homoeopathic drugs contain alcohol, it is evaporated in 3 min from antibiotic disc at 37°C. The different zones of inhibition, are seen in above table. Even though alcohol has bactericidal property it should kill bacteria in same zone inhibition. But there is large difference in zone inhibition. Hence the zone of inhibition is due to homoeopathic drugs. *Arnica* Mother Tincture and *Calendula* 1M show highest zone inhibition.

This proves two things that (1) *Arnica* is useful as external application as an antiseptic. Strains of *Staphylococcus-aureus* species are more susceptible to *Arnica* MT than *Calendula* MT. 2) Different potencies have different action. Drugs in 30,200, 1M potencies are not seen even in spectrometry. But still they act in human beings and in vitro also as per different zone inhibition shown in culture. This proves that homoeopathic drugs act in vitro also. So in wounds we can use *Arnica* MT and *Calendula* MT in combination or in single and higher potencies 30, 200, 1M internally to promote the wound healing. Drug selection on the basis of homoeopathic laws will help more.

CONCLUSION

- 1) Homoeopathic drugs act in vitro and in vivo.
 - 2) Different potencies of same drug have different action.
 - 3) The susceptibility of the *Staphylococcus-aureus* species is far more to *Arnica* MT and *Calendula* 1M. This project took near about 1½ years. Finally the Maharashtra University of Health Sciences, Nashik (Research department) accepted it, on 9th January 2006.
- I undertook this project under the able guidance of My beloved teacher Dr Suryakant S Gite M D (Homoeopathy).