A Homoeopathic Drug Proving of Trachyspermum Ammi

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Introduction

Homoeopathy is a specialised system of therapeutics based on the law of healing - Similia Similibus Curentur which means 'let likes be treated by likes'.

Homoeopathy offers a life of service to humanity and it is the only method of healing that surely sets the sick person on the permanent road to recovery.

Experimentation of a drug on healthy human beings to ascertain its pathogenetic properties is peculiar to the art & science of homoeopathy. These pathogenetic recordings form the foundation and basis of Homoeopathic Materia Medica and selection of Homoeopathic similimum.

Every Homoeopathic prescription is based on a comparison between the portrait of the disease and the drug picture obtained through drug proving. The law of Similars states that any substance which can produce a totality of symptoms in a healthy human being can cure that totality of symptoms in a sick human being.

Ever since the first drug proving of CINCHONA by Dr. Hahnemann the methodology of drug proving have been improved & undergone many modifications. Hahnemann's discovery of dynamisation of medicines is of the greatest importance to the development of the methodology of drug proving. By drug dynamisation the therapeutic virtue of crude drugs are activated, the toxicity of poisonous substances are annulled and the inert substances are aroused to activity so that the proving becomes more effective.

Proving of drugs on healthy human beings is a superior method when compared to proving on animals or sick persons. The effects of drugs on animals & human beings are different. Subjective symptoms cannot be studied in animals. An attempt to study the action of drugs on sick persons defeats its own purpose because the positive action of a drug is liable to be vitiated by the already existing disease in the organism.

Now the Homoeopathic Materia Medica is enriched with the provings of a vast number of drugs from all sources i.e. from vegetable kingdom, animal kingdom, minerals, nosodes, sarcodes, imporadablia & synthetic sources.

The plant kingdom is the largest source of Homoeopathic medicines. A continuing supply of high quality provings is essential for the progress of Homoeopathy. A good many Homoeopathic remedies are now being prepared from indigenous plants & herbs of India. The medicinal use of herbs & plants are mentioned in the Rig-Veda & widely used in Ayurvedic system of Medicine. Many of these drugs after proving on healthy human beings & used homoeopathically have found to effect magnificent cures. It is the duty of homoeopathic physician of India to make homoeopathic provings of these indigenous drugs & their by enrich our Materia Medica.

This is a humble effort made by me to homoeopathically prove Trachyspermum ammi, a well known Ayurvedic medicine which is commonly known as '**Ayamodakam'.** It is an aphrodisiac, anthelmintic, carminative & laxative. It is widely used in Ayurvedic medicine in the treatment for ascites, abdominal tumours, and enlargement of the spleen, piles, vomiting, abdominal pains, biliousness, toothache & good for the heart.

The Homoeopathic drug proving of Trachyspermum ammi helps to unfold the therapeutic virtues of the drug, so that after repeated provings & clinical verifications, it can be added to our homoeopathic Materia Medica and can be prescribed to the sick according to homoeopathic principles.

"We are here to add what we can to,
Not to get what we can from, LIFE"
- William Osler

AIMS AND OBJECTIVES

To introduce a new drug (Trachyspermum ammi) into Homoeopathic Materia Medica.
To elicit the symptomatology of the same through Homoeopathic drug proving.
To substantiate the symptomatology of Trachyspermum ammi with synthesis Repertory.

REVIEW OF LITERATURE

THE CONCEPT OF DRUG PROVING

Drug proving is the method for ascertaining the pathogenetic power (disease producing) of drugs and hence the method for ascertaining the curative power of drugs. Drugs are substances which possess the power of altering when used on human system (body, mind and vital force). In health they can produce illness and when used correctly in illness can restore us to health.

Proving [5, 9, 10, 25, 48, 50 & 85] is a commonly used word in Homoeopathy. It is derived from the German word **'Prufung',** which Hahnemann used for referring to Homoeopathic drug experiments (Trials) on healthy human volunteers. This word when translated into English means **Trial.**

Hahnemann states in the aphorism 105 0f the Organon of Medicine, 6th edition as - *"The second point of the business of a true physician relates to acquiring a knowledge of the instruments intended for the cure of the natural diseases, investigating the pathogenetic power of the medicines, in order, when called on to cure, to be able to select from among them, one, from the list of whose symptoms an artificial disease may be constructed, as similar as possible to the totality of the principle symptoms of the natural disease sought to be cured."*

Homoeopathic drug proving is a process in which the medicinal substance is administered in a systematic way to the healthy human beings over a period of days, just sufficient to initiate a reaction in the vital principle of the human economy and to record the pathogenesis produced by them on the provers. Carefully conducted Homoeopathic Drug proving on a healthy human being furnishes the true picture & knowledge of a drug that forms the base for the selection of the similimum. .

EVOLUTION OF THE CONCEPT OF DRUG PROVING [14, 15, 17, 18, 20]

It was **Albrecht von Haller**, who besides Hahnemann saw the necessity of this genuine mode of testing medicines for their pure and peculiar effects in deranging the health of man, in order to learn what morbid state each medicine is capable of curing (footnote to aphorism 108).

Haller said - *"Indeed, a medicine must first of all be assayed in a healthy body, without any foreign admixture. When the odour and taste have been examined, a small dose must be taken and attention must be paid to every change that occurs, to the pulse, the temperature, respiration and excretions. Then having examined the symptoms encountered in the healthy person, one may proceed to trials in the body of a sick person."*

Hahnemann was competent in different languages (he knew 14 languages) and used to translate many works of considerable significance. In 1790 while translating "A treatise on Materia Medica" (second volume) by Dr. William Cullen who was a leading teacher, chemist & Physician in Edinburgh, from English to German language, Hahnemann came across the statement made by Dr Cullen in the book regarding the action of Cinchona bark in the cure of ague. i.e., by virtue of bitterness and the tonic effect on the stomach, the drug cured ague. Dr. Cullen was the authority of Materia Medica on that time. But this explanation did not satisfy Hahnemann as there were plenty of bitter drugs but not possessing the ague curative power. He thought of testing the positive action of cinchona bark on his own body.

Hahnemann therefore resolved to ascertain, by the natural method of experience, wherein lay the power of cinchona bark to allay intermittent fever. He says - *"I took for several days, as an experiment, four drachms of good Cinchona twice daily. 'My feet and finger tips, etc at first became cold; I became languid and drowsy; then my heart began to palpate, my pulse became hard and quick; an intolerable anxiety and trembling (but without a rigor), prostration in all the limbs, then pulsation in the head, redness of the cheeks, thirst; briefly, all the symptoms usually associated with intermittent fever appeared in succession, yet without the actual rigour. To sum up: all those symptoms which to me are typical of intermittent fever, as the stupefaction of the senses, a kind of rigidity of all joints, but above all the numb, disagreeable sensation which seems to have its seat in the periosteum over all the bones of the body - all made their appearance. This paroxysm lasted from two to three hours every time, and recurred when I repeated the dose, not otherwise. I discontinued the medicine and I was once more in good health'."*

i.e., Hahnemann experienced symptoms similar to ague after taking this drug. He had discovered a great principle – The drugs cure diseases that it can produce on a healthy person. This event led to the development of a new therapeutic system – Homoeopathy. Drug after drug, specific after specific was tested by Hahnemann on himself and on his family and friends, all with one result - each remedy of recognized specific power excited a spurious disease resembling that for which it was considered specific. He verified

his discoveries and observations by exploring volumes of recorded experiments on Materia Medica and history of poisonings.

Hahnemann made the induction that diseases which were cured by medicines are by the virtue of the power of the medicines to produce symptoms similar to those of diseases which it cured. After six years of careful study & observations he formulated the principle "Similia **similibus curentur**" [16 & 17] – Let likes be treated by likes.

He published an article in 1796 in Hufeland's journal under the title "An essay on a new principle for ascertaining the curative power of drugs" in which he propounded the Homoeopathic therapeutic rule. In a few years more he was able to give an array of medicinal substances whose pure pathogenetic action he had ascertained by experiments on himself, his family & few friends. The results of the laborious & pains taking experiments were published in 1805 in "Fragmenta De Viribus Medica mentorum positivis sive Insano Corporo Humano observatis". It is the first published Materia Medica by Dr. Samual Hahnemann. It was in Latin & published at Lepsic and contains the pathogenesis of 27 drugs.

Later in the same year he published his celebrated essay called "The Medicine of Experience" & in this essay he details at length how experiments with medicinal substance are done in order to ascertain their pathogenetic effects.

After 6 years, in 1811 appeared the first volume of "Materia Medica Pura" containing 12 medicines. Volume II in 1816 with 8 medicines; Volume III in 1817 with 8 medicines; Volume IV in 1818 with 12 medicines, Volume V in 1819 with 11 medicines & Volume VI in 1821 with 10 medicines, of these medicines 22 were transferred from the Fragmenta.

Later Die Chronischen kranheiten (The Chronic Diseases, their peculiar nature & their Homoeopathic cure 1835 – 1839) was published which contained 47 medicines.

Hahnemann conducted repeated experimental drug studies on himself & 64 Volunteers whose names were listed in his Materia Medica Pura. In total he investigated 99 remedies over a period of about half a century, establishing the method which has came to be known as Proving(or testing) Medicines.

PROVING GUIDELINES AS PER ORGANON OF MEDICINE - SIXTH EDITION [2, 50]Aphorisms 105 - 145

For the selection of a suitable homoeopathic remedy for the natural diseases, the whole pathogenetic powers of medicines must be known. All the morbid symptoms and alterations in the health that each medicine is capable of producing in a healthy individual must first be observed before administering the similimum. (Aphorism 106)

Method of Preparation of Drugs for Proving [50]

The purity, genuineness and energy of the medicines must be thoroughly assured, and for this purpose (Aphorism 122)

1. Each of the medicine must be taken in a perfectly simple, unadulterated form. (Aphorism123)
2. The indigenous plants in the form of freshly expressed juice must be mixed with a little alcohol to prevent its spoiling. (Aphorism 123)
3. Exotic vegetable substances must be prepared in the form of powder or tincture prepared with alcohol when they are in the fresh state and afterwards mixed with a certain proportion of water. (Aphorism 123)
4. Salts and gums should be dissolved in water just before being taken. (Aphorism 123)
5. If the plant can only be procured in its dry state, an infusion of it may be made by cutting the herb into small pieces and pouring boiling water on it, so as to extract its medicinal parts. Immediately after its preparation, it must be swallowed while still warm as all expressed vegetable juices and all aqueous infusions of herbs without the addition of the spirit pass rapidly into fermentation and decomposition whereby all their medicinal properties are lost. (Aphorism 123)

PRECAUTIONARY MEASURES TO BE TAKEN DURING PROVING[50]

Regarding the medicine to be proved

* Every medicinal substance must be employed quite alone and perfectly pure without the admixture of any foreign substance and without taking anything else of a medicinal nature the same day, or yet on the subsequent days, or during all the time, the effects of the medicine are to be observed. (Aphorism 124)

Regarding the prover

(a) During the whole period of the experiment the diet of the prover must be strictly regulated - it should be as much possible destitute of spices, of roots and all salads and herb soups. The diet should be of a purely nutritious and simple character, consisting of green vegetables. Young green peas, green French beans, boiled potatoes and in all cases carrots are allowable, as the least medicinal vegetables. (Aphorism 125)

(b) The drinks are to be those usually partaken of, as little stimulating as possible. The prover must either be not in the habit of taking pure wine, brandy, coffee or tea or he must have totally abstained for a considerable time previously from the use of these beverages, some of which are stimulating, others medicinal. (Aphorism 125)

(c) The prover must be pre-eminently trustworthy and conscientious. (Aphorism 126)

(d) During the whole period of proving he must avoid all overexertion of mind and body, all sorts of dissipation and disturbing passions.

(Aphorism 126)

(e) He should have no urgent business to distract his attention.

(Aphorism 126)

(f) He must be self-observing and not be disturbed whilst so engaged. (Aphorism 126) (g) He must possess a sufficient amount of intelligence to be able to express and describe his sensation in accurate terms.

(Aphorism 126)

(h) The medicines must be tested on both males and females in order to ascertain especially the changes in the sexual sphere. (Aphorism 127)

Determination of dosage and its difficulties –
Mode of administration [50]

- Drug proving is not so simple and easy a matter for the following reasons -
- Medicinal substances, in their crude state, do not exhibit nearly the full amount of the powers that lie hidden in them, which they do when they are taken in high dilutions. In this manner, one can investigate the medicinal powers even of substances that are deemed weak. (Aphorism 128)
- Medicine should be given to the prover, on an empty stomach, daily from four to six very small globules of the thirtieth potency, moistened with a little water or dissolved in more or less water and thoroughly mixed and this is continued for several days. (Aphorism 128)
- If the effects of this dose are but slight, a few more globules may be taken daily, until they become more distinct and stronger and the alterations of the health more conspicuous. (Aphorism 129)
- All persons are not affected by a medicine in an equally great degree. On the contrary, there is a vast variety in this respect. An apparently weak individual may be scarcely affected by moderate doses of a medicine known to be of a powerful character, whilst he is strongly enough acted on by others of a much weaker kind. (Aphorism 129)
- On the other hand, there are very robust persons who experience very considerable morbid symptoms from an apparently mild medicine and only slighter symptoms from stronger drugs. (Aphorism 129)
- As this cannot be known beforehand, it is advisable to commence in every instance with a small dose of the drug and, suitable and requisite, to increase the dose more and more from day to day. (Aphorism 129)
- If at the very commencement, the first dose administered is sufficiently strong, it is advantageous in a way that the experimenter learns the order of succession of the symptoms and can note down accurately the period at which each occurs, which is very useful in leading to a knowledge of the genius of the medicine, for then the order of the primary actions and alternating actions is observed in the most unambiguous manner.
- (Aphorism 130)
- A very moderate dose even often suffices for the experiment, provided only the prover is sufficiently delicate and sensitive and is very attentive to his sensations. (Aphorism 130)
- The duration of a drug can only be ascertained by a comparison of several experiments. (Aphorism 130)

Rules for an exhaustive proving of the drug [50]

1. The drug must be proved, both in dilutions and in massive doses.

2. If the same medicine is given to the same person to test for several successive days in ever-increasing doses, the various morbid states that the medicine is capable of producing in a general manner is learnt, but not their order of succession; and the second dose often removes curatively, some of the symptoms caused by the previous dose, or develops in its stead an opposite state. Such symptoms should be enclosed in

brackets, to mark their ambiguity, until subsequent purer experiments show whether they are the reaction of the organism and secondary action or an alternating action of the medicine. (Aphorism 131)

3. But when the object is only to ascertain the symptoms, especially of a weak medicinal substance and neither the sequential order of symptoms, nor the duration of action of the drug, then it is to be administered for several successive days, increasing the dose every day. In this manner, the action of an unknown medicine, even of the mildest nature, will be revealed, especially if tested on sensitive persons. (Aphorism 132)

4. On experiencing any particular sensation, the exact nature of symptoms needs to be determined, as for example - to observe whether, by moving the affected part, by walking in the room or open air, by standing, sitting or lying the symptom is increased, diminished or removed and whether it returns on again assuming the position in which it was first observed - whether it is altered by eating or drinking, or by another condition, or by speaking, coughing, sneezing or any other action of the body and at the same time to note at what time of the day or night it usually occurs in the most marked manner. In short, what is peculiar to and characteristic of each symptom will become apparent. (Aphorism 133)

5. All the symptoms peculiar to a medicine do not appear in one person, nor all at once, nor in the same experiment, but some occur in one person chiefly at one time, others again during a subsequent trial. In another person, some other symptoms may appear; moreover they may not recur at the same hour. (Aphorism 134) The greatest care should be exercised in verifying symptoms by repeated experiments, in order that "imaginary" symptoms as well as chemical and mechanical symptoms may be excluded.

When a medicine can be considered to have been thoroughly proved [50]

A medicine is regarded to have been completely proved when

1. Numerous observations are made on suitable persons of both sexes and of various constitutions. (Aphorism 135)
2. Subsequent experiments can notice little of novel character from its action. (Aphorism 135)
3. During reproving only the same symptoms are noticed as had been already observed by others. (Aphorism 135)
4. The symptoms are recorded complete with regard to their sensations, localities, modalities and concomitant factors so that a complete individual picture of the drug disease has been ascertained.

Although a medicine on being proved on healthy subjects cannot develop in one person all the alterations of health it is capable of causing, but can only do this when given to many different individuals, varying in their corporeal and mental constitution, yet the tendency to excite all these symptoms in every human being exists in it. (Aphorism 136)

RELATIVE MERITS OF EMPLOYING LARGE AND MODERATE DOSES OF MEDICINE IN PROVING [50]

(A)DISADVANTAGE OF EMPLOYING LARGE DOSES OF MEDICINE IN PROVING

If excessively large doses are used, there occur at the same time not only a number of secondary effects among the symptoms, but the primary effects also come on in such hurried confusion and with such impetuosity that nothing can be accurately observed. (Aphorism 137)

(B)ADVANTAGES OF EMPLOYING MODERATE DOSES OF MEDICINE IN PROVING

The more moderate the doses of the medicines - so much the more distinctly are the primary effects developed, and only these occur without any admixture of secondary effects. (Aphorism 137)

RECORDING OF THE PROVING [2, 10, 50]

The Day Book

(a) The prover must note down distinctly the sensations, sufferings, accidents and changes of health, he experiences at the time of their occurrence, mentioning the time after the ingestion of the drug when each symptom arose and if it lasts long, the period of its duration, and to keep a day book for the purpose. (Aphorism 139)

(b) The physician looks over the report in the presence of the prover immediately after the experiment is concluded; or

(c) If the experiment is continued for a long period of time he inspects the day book of the prover daily while everything is still fresh in his memory and questioning him about the exact nature of every one of those circumstances, write down the more precise details and makes each symptom precisely complete with regard to its sensation, localities, modalities and other concomitant factors. (Aphorism 139)

(d) If the prover is illiterate and cannot note down his alterations in health, he must inform the physician every day of what has occurred to him, and how it took place. What is noted down as authentic information must be chiefly the voluntary narration of the person who makes the experiment, nothing conjectural and not derived from answers to leading questions, to ensure authenticity. (Aphorism 140)

BUILDING UP OF THE MATERIA MEDICA [2, 10, 50]

If tests with a considerable number of simple medicines have thus been carried out on healthy individuals, and a careful and faithful recording of all the disease elements and symptoms that they are capable of developing is done, then only a true Materia Medica can be built up.

This will be then a collection of real, pure, reliable modes of action of simple medicinal substances, a volume, wherein is recorded a considerable array of the peculiar changes of the health and symptoms ascertained to belong to each of the powerful medicines, as they were revealed to the attention of the observer, in which the likeliness of the (homoeopathic) disease elements of many natural diseases to be hereafter cured by them are present, which, in a word, contain artificial morbid states, that furnish for the similar natural morbid states the only true, homoeopathic, that is to say, specific, therapeutic instruments for effecting their certain and permanent cure. (Aphorism 143)

From such a Materia Medica, everything that is conjectural, all that is mere assertion or imaginary should be strictly excluded. Everything should be the pure language of nature carefully and honestly interrogated. (Aphorism 144)

Of a truth it is only by a very considerable store of medicines accurately known in respect of these their pure modes of action in altering the health of man that we can be placed in a position of discover a homoeopathic remedy, a suitable artificial (curative) morbific analogue for each of the infinitely numerous morbid sates in nature, for every malady in the world. Few disease remain for, which a tolerably suitable homoeopathic remedy may not be met with among those now proved as to their pure action, which without much disturbance, restores health in a gentle, sure and permanent manner infinitely more surely and safely than can be effected by all the general and special therapeutics of the old allopathic medical art with its unknown composite remedies, which do but alter and aggravate but cannot cure chronic diseases, and rather retard than promote recovery from acute diseases and frequently endanger life. (Aphorism 145)

We thus build a complete Materia Medica. It is to borne in mind that the daybooks are not the Materia Medica. Not until the masses of symptoms have been analyzed, sifted, classified. Hahnemann called it Materia Medica Pura, because it consisted of the collective statements of the positive and perceptible reactions of the healthy human body recorded in the words of persons acted upon by drugs and admits no misinterpretations with changing medical terminology, altered biological concepts and newer scientific developments.

DR. CARROLL DUNHAM'S VIEW REGARDING [4]
THE DOSE IN DRUG PROVING

The symptoms which drugs produce upon the healthy organism vary according to the dose. They may be:
1. CHEMICAL- depending on the chemical affinity which exists between the drug and the tissues of the body, and independent of vitality;
2. MECHANICAL (or revolutionary), consisting chiefly in violent efforts on the part of the organism to eject from its cavities the offending substance;
3. DYNAMIC, contingent upon vitality and resulting from the relations of the peculiar properties of the drug to the susceptibilities of the living, healthy organism.
These dynamic effects may be:
A. Generic-such as are common to all the members of a certain class of drugs and which serve to distinguish this class from others, but do not furnish means of distinguishing between different individuals of the same class.
B. Specific- such as results from the dynamic action of the drug and are peculiar to it. They serve to distinguish a given drug from all others.
The Specific-dynamic symptoms may be again sub-divided into Central and Peripheral.

The Central symptoms appear speedily after the drug is taken, are generally the result of comparatively large doses and, in the case of many drugs, are confined to the alimentary canal and to the organs immediately connected with it. The Peripheral symptoms appear more tardily, are generally the result of comparatively small doses, taken repeatedly or allowed to act without interruption for a long period, and appear in the bones, skin, glands, etc., and in the coordinated

phenomena of life. They are often the manifestations of a dyscrasia or cachexy. Doses which produce central symptoms do not generally produce the peripheral (or at least not until after a long period has elapsed) and vice versa.

Such are the varieties of symptoms produced by corresponding varieties in the dose. It is hardly necessary to say that they are or always to be distinguished with precision; but the facility with which we are able to recognize them is in proportion to the completeness of our proving.

It unquestionably beholdes the homoeopathic physician to have an exhaustive knowledge of the whole sphere of action of his drugs; but, as a prescriber, he must be familiar with the varieties and sub varieties of dynamics effects which we have specified. This knowledge is to be attained in the first place only by drug-proving. The proving of drugs must then be so conducted as to produce in the greatest possible completeness and clearness, each of these varieties and sub varieties. This, as has been shown, is to be accomplished by a skilful selection and succession of doses. It is not so simple and easy a matter as it might at first view appear to be: for,

Firstly: The doses, by which the corresponding varieties of symptoms are produced, differ widely in different varieties. For example, a half grain of crude Nitrate of silver or of Sulphuric acid produces chemical symptoms, while a half grain of Lycopodium or of Silicea produces probably no symptoms at all. A grain of Arsenic produces generic dynamic symptoms, while ten grains of Natrum muriaticum may be inert. Forty drops of Bryonia tincture may excite a fair show of specific dynamic symptoms, while forty drops of tincture of Opium will produce generic dynamic symptoms or full narcotism.

Secondly: The susceptibility of different provers to the same drug is very different, and the degree of susceptibility which each prover possesses is to be learned only by experiment. For example, one prover will take five hundred drops of Thuja without any effect; another, taking twenty drops, experiences violent specific symptoms.

Thirdly: The susceptibility of provers to different preparations of the same drug is very various and apparently capricious. One record characteristic specific symptoms from large doses of the crude drug, and is not affected by smaller doses; another is acted on by dilutions and not by any quantity of the crude substance.

The relative power of a drug and susceptibility of the prover being altogether unknown until ascertained by direct experiment, the proving of a new drug is therefore a matter of pure experiment in every particular, and it might at first view be supposed to be a matter of indifference in what manner or with what doses the experiment is begun which variety or sub variety of symptoms is first developed, whether we take heroic doses and develop chemical symptoms or small doses and produce peripheral dynamic symptoms; since in either case we should be able by subsequent experiments based on the first, to develop the complementary symptoms and thus complete our proving. Experience teaches, however, that this supposition is not sound, and for the following reasons: Drugs vary not more in the intensity than in the permanence of their action upon the organism. Some drugs appear speedily to exhaust, sometimes by a single large dose, the susceptibility of the prover, so that no subsequent doses, whether large or small, produce any effect. Of others again, a single large dose develops some one generic or central specific symptom, and along with it induces such an exalted and distorted susceptibility that every subsequent dose, whether large or small, evokes straightway that one symptom or series of symptoms and none other. Thus the proving is in either case partial and incomplete-we fail to get those symptoms which are the most valuable of all to us, as being those which clearly characterize the drug and enable us to distinguish it from all other drugs, viz: the peripheral and central specific dynamic symptoms. To illustrate this point, it is well known that Mercury given in such doses as to produce central specific symptoms, induces often so great a susceptibility of the organism to the action of this drug that subsequent doses, even of tolerably high dilutions, provoke straight-way a series of central symptoms. The same is true of Arsenic. We have seen a case in which, generic and specific symptoms having once been produced by massive doses of Tartar emetic, the organism remained so sensitive to the action of this substance, that a few globules of the thirtieth dilution would at any time produce vomiting and diarrhoea, with cold sweat and prostration. It may be said that these are cases of very unusually great susceptibility to the action of the respective drugs. This is true, but it is precisely such cases of great susceptibility that are of exceeding value to us, for in them, by judicious experimentation, we could get most valuable peripheral symptoms, unalloyed by generic or by revolutionary effects.

There is no reason to believe, on the other hand, that small doses, so administered as to produce the peripheral specific symptoms, modify the susceptibility of the prover in any such way as to prevent his obtaining by subsequent larger doses the central specific, the generic dynamic, or even the chemical and mechanical effects. It follows from what has been said, that to obtain an exhaustive proving of a drug, we should begin with small doses, gradually increasing the quantity until unequivocal symptoms appear. We shall thus, if we continue our experiments a suitable length of time, obtain peripheral symptoms; and these small doses will not have so influenced the system as to prevent our obtaining by subsequent larger doses the other varieties of effects. Inasmuch as, in the nature of things, the peripheral symptoms, representing, as they do, a cachexy, cannot be speedily produced, a considerable space of time should be devoted to our first experiments with small doses. Finally, after an interval of non-medication, larger doses should be taken until we have exhausted the whole dynamic action of the drug, and even obtained a fair picture of its chemical and revolutionary action, although this may in a measure be gained from records of poisonings.

In conclusion, we may assume the following points to be established by induction and by direct experience:
In order to obtain an exhaustive proving:
1. We must prove the drug both in dilutions and in massive doses.
2. The proving should be commenced with dilutions: and high dilutions should be employed until satisfactory evidence is obtained that the prover is not susceptible to their action. We thus obtain one of the unknown quantities of our problem, viz., the measure of the susceptibility of the prover.
3. Where a keen susceptibility is found to exist, the greatest care must be exercised to avoid blunting or perverting it. With this view, repeated experiments should be made at long intervals, with high potencies, until no new varieties of symptoms are evoked. Then, after a long period of non-medication, the prover should take lower potencies and then small doses of the crude substance repeated at intervals, and finally after another long period of repose, large doses of crude substance. A thorough proving after this fashion may require years for its completion-but it will have an advantage over most of our recent provings, in the fact that it will be thorough, and that it will be of permanent and certain use to the practitioner.
4. In proving with dilutions, as well as with massive doses, a long period of time should be occupied in testing each preparation, in order that the full effect may be seen in the production of dyscrasias, etc.
5. The greatest care should be exercised in verifying symptoms be repeated experiments, in order that "imaginary" symptoms on the hand and chemical and mechanical symptoms on the other may be excluded. The fashion, which has become very prevalent of late, of including in the pathogenesis every sensation which occurs during the proving, without distinction or verification-and which may be called the Pre-Raphaelite method of proving-cannot be too strongly rebuked.

DR. J.T.KENT'S VIEW ON DRUG PROVING[25]
Kent advises all the provers to examine themselves for at least a week for the proving and note down all the symptoms that he or she is the victims of at the time and for many months back. After the prover is given a single dose of medicine, we should wait & see if it produces any symptom. As in a case of studying of miasms, we should understand the prodrome, period of progress and period of decline of the action of drug. If the prover is sensitive, single dose will produce symptoms especially in case of short acting medicines. But in case certain other medicines sulphur, silicate of Alumina etc, it will take a longer time to produce symptoms as the period of prodrome in this remedies will be longer and medicines should not be repeated during the period. If the medicines produces no effect & after enough time has been given to be sure that the prover is not sensitive to it. To intensify the effect, dissolve the medicine in water and give it every two hours for 24 to 48 hours unless the symptoms arise sooner. By this means the prodromal period is shortened. As soon as the symptoms begin to show, it is time to cease the remedy and wait as the image producing effect of drug comes spread and go away by itself. Dr. Kent warns not to interfere & the dose of medicine should not be repeated while the symptoms are appearing, as this will engraft upon the constitution of the patient. A diathesis of the remedy proved and it is dangerous thing to do & these effects of proving may be carried till the end of their lives. But a proving properly conducted will improve the health of the prover, it will help to turn things into order. Dr. Kent recommended that provers should not know what they are taking & they are requested not to make known to each other their original symptoms, whether cured, exaggerated or not interfered with. When the symptoms occur in their own natural way without being increased or diminished, it is considered as a natural thing of the prover and these symptoms are eliminated.

DR. H.A ROBERT'S VIEW ON DRUG PROVING[41]
A drug is any material agent, in however attenuated form, the ingestion of which is capable of disturbing this balance of the vital forces that the functioning of one or more organs of the body is no longer carried

out to the best of the whole; and any material substance capable of so acting on the living organism is a drug.

To ascertain the knowledge of a drug is to discover what disturbance of this balance it is capable of producing and what organs are affected; how and what functional changes are made manifest. When we have discovered all this about a drug we can say we have a proving. In order to be sure of the integrity of our work, we must demand three essential things:

1. The quality of the drug must be pure; it must be free from all mixture with other drugs, and it must possess all its active properties
2. The prover must possess the proper balance in functions and be in a normal, healthy state, so that we can estimate and weigh the amount of the disturbance caused when we deliberately upset the balance of health.
3. The circumstances surrounding the prover must be those of his normal surroundings, so that the drug can express its action under conditions and circumstances normal to the prover, that any deviation from normal in the prover's condition cannot be attributed to different circumstances and conditions of his life, but directly to the action of the drug.

- The ordinary habits of life must be observed, and his ordinary work maintained; otherwise changes from his routine might cause some deviation from his normal balance which would be attributed to the drug action.
- All people do not make equally good provers. Some types are more susceptible to certain drug groups than are other types, and those who manifest susceptibility to the action of a drug to the point of developing symptoms must be secured for a satisfactory proving.
- The prover must be intelligent enough properly to appreciate and record the subjective symptoms as deviations from his normal conditions of life, as these subjective symptoms are of the utmost value.
- Honesty is a prerequisite of a good prover, for he must be very careful to record all phenomena as fact. Remember, a proving is a record of facts - facts that can be produced repeatedly in others; therefore facts must be carefully recorded from the very beginning of the experiment; yet we must avoid equally skepticism, imaginary phenomena or the over-colouring of the real facts.
- At the beginning of this work, the prover must be in that state of mental, moral and physical equilibrium that is characteristic of a normal, healthy being.
- In making the record, the master prover must determine those symptoms of the greatest value, especially those which are the most peculiar and characteristic of the drug-the rare, unusual symptoms that distinguish it from all others, because these are the symptoms which will be the curative symptoms, in that they will be the guiding symptoms in selecting the remedy.
- In making the analysis the three major points of all symptoms should be borne in mind: Location; sensation; and the modifying character of the symptoms, or modalities, together with the concomitant or apparently unrelated symptoms.
- Any drug which in its natural state affects the vital energy but little will develop a proving only in a high potency.
- Any drug which in its natural state disturbs the vital energy to functional manifestations only may be proven in a crude form.
- Any drug which in its natural state disturbs the vital energy to destructive manifestations should be proven only in a potentiated form.
- The susceptibility of the patient or prover must be taken into consideration; this regulates and gives us direction as to the quantity of the drug to be taken. The greater the susceptibility, the less the quantity required to react upon the vital force.
- To use the dose and quantity that will thoroughly permeate the organism and make its essential impress upon the vital force and thus affect the functional sphere of his body.
- The repetition of the dose will be governed by the nature of the drug and the reaction of the vital energy.
- Never repeat the dose while symptoms are manifest from the dose already taken.
- Never repeat the remedy so long as it continues to act.
- Recording of the symptoms must be in the order of appearance.
- Record the concomitant symptoms. They are symptoms which while seemingly unrelated to the case, yet bear a close relationship in that they appear at the same time and in association with the other symptoms.
- The value of the symptom record is largely based upon the order of appearance of symptoms and their associated or concomitant symptoms
- All symptoms have location, sensation, and the aggravations and ameliorations, plus their concomitants; these should all be recorded faithfully in every proving.

- In making the record of many proving of the same drug there is an inclination to omit as insignificant a symptom recorded by only one prover.

DEVELOPMENTS IN THE FIELD OF HOMOEOPATHIC DRUG PROVING AFTER DR. HAHNEMANN[21]

- The first to appear in the field of drug-proving after Hahnemann had led the way was no follower of his, but a professor of the University of Leipsic, **Dr. Johann Christian Gottfried Jorg.** He published at Leipsic in 1825 a first volume of the results obtained.
- The next to take up the work of instituting and publishing drug-proving were two distinguished members of the homoeopathic school-**Drs. Hartlaub and Trinks.** Their work was published at Leipsic in three volumes, dated 1828, 1829, and 1831 respectively.
- **Nenning's** symptoms were obtained in the true way, viz., by proving on the healthy body; All Austrians were forbidden by a strict law to send anything outside of Austria to be printed; hence not only Nenning, but all other Austrians, appeared in our literature with only initials.
- The next name on our list is that of **Dr. Ernst Stapf.** This physician, one of Hahnemann's oldest and most valued disciples, began in 1822 to publish a Journal generally known simply as the Archive, or-very often-Stapf's Archive. The whole work makes a very valuable volume; and, as it has been rendered into English by Dr. Hempel.
- In **Austria,** from 1842 onwards, the Homoeopathic society of Vienna undertook numerous reproving, as well as establishing new pathogeneses. Most of them have been translated into English with more or less completeness.
- **France** has given some indigenous proving, done by Drs. Roth, Jahr, Petroz, Ozanam, Teste, Molin, and Imbert-Gourbeyre; and published in the French homoeopathic Journals.
- **England** has contributed little more to our pathogenetic treasury. The Kali bichromicum of Drysdale, the Naja of Russell, the Cedron of Casanova, the Cotyledon umbilicus of Craig, and the Uranium nitricum of Edward Blake.
- **Spain** - Tarantula Of Nufiez
- **Italy** - Cactus of Rubini
- From **Brazil** we have received a collection of proving of the plants and animal venoms indigenous to that country instituted by Dr. Mure, of Rio.
- **American** sources of the Homoeopathic Materia Medica; and the first and most illustrious name on the record is that of **Dr. Constantine Hering -** Lachesis, Apis, and Glonoine. Honoured name among the American contributors to our Materia Medica, Neidhard, Jeanes, Williamson, Joslin, **Dunham, Allen,** Conrad Wesselhoeft & **Dr. E. M. Hale**. The chief instigation and collection of the proving of the United States has proceeded from the American Institute of Homoeopathy.
- **Hering** describes the five steps involved in drug proving in the preface of Vol 1 of his 'Guiding symptoms of Homeopathic Materia Medica'. they are
- **Probability** - When a symptom occurs in a proving, there is first a certain probability that it belongs to the remedy picture.
- **Confirmation** - Confirmation is obtained by several volunteers during the same proving or when they recur in other proving.
- **Corroboration** - Which means to look for physiological or pathological effects of the drug, when taken in a raw substance, i.e? By accident or in daily life?
- **Verification** - When the drug is given to the sick according to the symptoms it has produced in the healthy, cures made are the verification.
- **Characteristics** - When a symptom is consistently verified by the cures, it becomes characteristic for the remedy.
- A new fountain of Materia Medica was opened in 1865 by **Dr. E...M. Hale, of Chicago.** The result was the volume entitled *new remedies in Homoeopathic practice.*
- **Dr Allen of New York** contributes Encyclopedia of pure Materia Medica in 10 volumes.
- **Dr Richard Hughes and Dr J.P Dake** compiled and edited a Homoeopathic Materia Medica Called 'A Cyclopedia of Drug Pathogenesy'.

The doses employed varied from the sub toxic material doses to the 30C. In U.S.A, Kent's school of Physicians were used the 30C in their reproving.

In the United States, the proving technique was perfected by the use of placebos as control during proving and reproving. In two reproving of Belladonna carried out in Boston in 1906, one by the American

Homoeopathic Ophthamological and Otorhinolarygological Society and second conducted under the direction of Professor Howard P. Bellows(three re-proving of belladonna conducted by him) , the general instruction for the conduct of proving specify without any ambiguity, the use of placebos, double blind technique and cross-over studies.
FRANCOIS LAMASSON, former President of the International Homoeopathic Medical League, has discussed the experimental conditions which should apply in modern proving. In the Annales Homoeopathiques Francaises of 1965, he insists on the necessity of single or double blind technique, on varied subjects, using a range of dilutions, and at different times of the year. The international council for research in Homoeopathy chaired by the late Dr. William Gutman of New York put forward certain recommendations for the conduct of proving.

PRESENT CONCEPT OF DRUG PROVING [11]

Hahnemann preferred proving drug substance on himself and his trusted fellowmen. All these proving were either open or single blind i.e. Hahnemann knew the medicine he was proving on himself and others. With passage of time, however things changed. In order to eliminate false signs / symptoms and subjective bias, Drysdale proposed the double blind method for the proving of drugs in healthy volunteers where neither the proving master nor the prover knew the name of drug conducted for the proving.

Since 1948, Randomised Control Trial (RCT) [11] has become the standard design for drawing valid conclusions on the efficacy of the medicine.
The requests of an RCT are

1. *Control group:* The necessity of the control group is for the comparison of symptom obtained by the administration of medicine with those of the placebo.
2. *Blinding:* Masking both the provers and observers (double blind) for avoiding bias.
3. *Randomisation:* Randomisation is done for further reducing bias. So that all provers will get equal chance for receiving either medicine or placebo.
4. *Statistical evaluation:* one additional requirement is that the result of a well planned and conducted trial has to be evaluated by statistical methods.
   RCT can be conducted in two different ways.

(1) Cross over technique
(2) Parallel studies

The cross over technique is the better design. In this design, each prover will receive both the medicine and placebo at different stages of proving.

Here both the prover as well as the proving supervisor does not know if a particular volunteer is given the drug or the placebo for proving. Only the proving director or another person who is not directly interacting with the proving knows.
The bias during the proving is thus reduced.
In 1996, Flavio Dantas coined the new term for drug proving-'Homoeopathic Pathogenetic Trial' (HPT) [11]

HPT is the first systematic experimental approach to detecting changes in the healthy volunteers after exposure to a drug. HPT is a clinical trial to investigate the effects of potentially toxic or pathogenetic substances diluted and attenuated according to the homoeopathic Pharmacopoeias, in non-patient volunteers in relatively stable health conditions. HPT aims to produce valid and useful data concerning objective and subjective changes at mental, general or local levels, provoked by a homoeopathic medicine in apparently healthy human beings. This information together with the data from toxicological sources and clinical experience resulting from the use of the medicine in patient is used to build a data set which can be incorporated into the Materia Medica. This data set can now be used and compared with the symptoms an individual patient is experiencing and a similar homoeopathic drug can be found for rooting out the disease in the patient. HPT is similar in conception to the Phase 1 clinical trials according to the FDA regulations developed in the 1960's.

MINIMUM STANDARD FOR HOMOEOPATHIC DRUG PROVINGS GIVEN BY EUROPEAN COMMITTEE OF HOMOEOPATHY [11, 63]
(SUBCOMMITTEE ON DRUG PROVINGS)

1. QUALIFICATION OF THE PROVING MASTER

1. Minimum 5 years experience in homoeopathic practice.
2. To have personally proved a minimum of three remedies as a volunteer

2. CASE TAKING (before pre-observation phase), case taking is

Obligatory.

a. For the safety of volunteer, to make sure that they are healthy enough to take part in proving.
b. To give baseline of the actual state of health and symptoms.
c. To make sure that the volunteer has properly understood the purpose and procedure of proving, is reliable (Aphorism 126, Organon of medicine) and is able to express their symptoms precisely enough.

3. INCLUSION CRITERIA

The volunteers must be healthy in the sense that they do not show severe psychic or physical symptoms and do not consider themselves to be in need of medical treatment. The proving doctor should not see a necessity for treatment either.

4. EXCLUSION CRITERIA

Pregnancy, breast feeding, allopathic treatments or homoeopathic drugs, contraceptive pills (Intra-uterine pessaries often contain copper)

5. PRE OBSERVATION PERIOD

Not less than one week before intake of remedy, with recording of symptoms occurring during that time.

6. DRUG ADMINISTRATION

a. Definition of the remedy: Origin and identification, way of manufacturing (e.g.: Fresh plant, trituration of mother tincture, way of potentisation, solvent etc)
b. Dosage and potency: Normally 3x or 30c, 3 globules every 2 hours (if another application form or dosage is given, please explain), as long as no symptoms occur, maximum 6 times during one day, stop drug intake immediately if symptoms occur.

7 . DOCUMENTATION OF SYMPTOMS

i) Duration of observation of symptoms
ii) Supervision: Intense contact between proving doctor and, volunteer
iii) Has to be secured i.e. daily phone calls schedule of meeting.
iv) Symptoms should include location, sensation, modality, concomitants and chronological records (Illustrating how long after the commencement of the proving each symptom arouse) and should be presented following the head to foot scheme in distinct categories.
    - § New symptoms
    - § Old symptoms
    - § Altered symptoms
    - § Cured symptoms

8. THE LEGAL REQUIREMENTS OF THE COUNTRY MUST BE CONSIDERED.

At the time of Hahnemann, laboratory investigations and modern techniques to assess the effects of the drugs on prover were not available. This has resulted in difficulties to evaluate the physiological, anatomical, biochemical and pathological changes of the system on which the proving took place. So, to make the Materia Medica more pure & scientific, all the possible investigations will be during the proving of the drug.

HISTORY OF HOMOEOPATHIC DRUG PROVING IN INDIA [12, 38]

The idea of proving indigenous drugs of India first originated IN THE MIND OF Dr. S.C. Ghose, in1886 as he found that it is very unfortunate that the homoeopaths of India have done nothing to add to the dignity and usefulness of homoeopathy. So he proved Ficus religiosa in 1887 without any assistance or friendly advice of the homoeopathic fraternity of India, except the help of Dr.L. Salzer but outside India Drs. Coperthwaite, H.C.Allen, Nash, Halbert, Dudgeon, E.H.Porter, Clarke, Shedd and others encouraged and appreciated him.

Dr. S.C Ghose proved several new indigenous drugs of India and these proving were incorporated by Dr.J.H Clarke in his 'Dictionary of Materia Medica'. Dr. S.C Ghose had published a book namely 'Drugs of Hindustan' in which proving of 51 Indian drug are included.

Drs. D.N.Ray & P.C Majumdar came intro the field of drug proving and proved 3or 4 indigenous drugs of India. Drs. Pranada P. Biswar of Patna, K.K Bhattacharya has proved several indigenous drugs. Dr. P. Sankaran conducted drug proving on Aqua marina, Hirudo officinalis, and pituitary.

Drug proving now termed as Homoeopathic pathogenetic trials (HPT) are conducted now by Central council for Research in Homoeopathy. (C.C.R.H) since the emergence of Homoeopathy the process and & methodology of HPTs have improved greatly.

NEW PROVINGS INTEGRATED IN SYNTHESIS REPERTORY (8.1 EDITION) [45, 51]

- 42 Proving of **David Riley** (USA) - AMP, ATP, Baryta oxalsuccinata, Oxalis acetosella, Riboflavinum, Fumaricum acidum, Funiculus umbilicalis, Geranium robertianum, L-cysteinum, Manganum phosphoricum, Natrum pyruvicum, Verononica officinalis
- The proving by **Phou Souk-Aloun** (France)- Brucella melintensis, Calamus aromaticus, Cyclosporinum, Propanololum, Diazepam, GABA, Interferon
- Proving of **Jeremy Sherr** (UK)-Adamas, Androctonos, Brassica, Chocolate, Germanium metallicum, Haliaeetus leucocephalus, Hydrogen, Iridium metallicum, Neon, Plutonium nitricum.
- Proving from **Misha Norland** (U.K)- Agathis australis, AIDS, Arizona lava, Falcon peregrinus, Galla quercina rubber, Positronium.
- **Nancy Herricks** (U.S.A) Animal mind proving, Lac equinum, Lac delphinium, Lac leonnum, Lac loxodonto Africana, Lac lupinum, Sanguis soricis.
- **Lou Klein's** (Canada) proving-Carboneum dioxydum, Helodrilus Caligonosus, Loxoscoles recluse, Coriandrum sativum.

- **NualaEising** (Ireland)Granitum, Ignis alcoholis, Lime stone, Succinum,White marble.
- **Todd Rowe,** (USA) new remedies-Carnegia gigantean, Heloderma suspectum and Urolophus halleri.
- Tree proving by Sue Balance (New-Zealand) -Salix Alba, Pinus contorta, Pse.
- **Penny Sterling**(U.K)- Salix fragillis.
- **Teresa Beernard** (U.S.A)- Sambucus nigra
- **Steve Oslen** (U.S.A)- Abies Canadensis, Angelicae sinensis, Arbutus menziessi, Borrago Officinalis udo Tsuga menziessii, Taxus buccata,

- Alnus rubra.
- **Greg Bedayn** (U.S.A)- Tungsten
- **Clayton Collyer** (U.K)- Lavendula
- **Jacqueline Houghton and Elizabeth Hallahan** (U.K)- Lac humanum
- **Friedrich Ritzer** (D)-Placenta
- **Marco Riefer** (C.H)-Monila

TRACHYSPERMUM AMMI [6, 7, 8, 13, 26, 27, 28, 29, 30, 31, 36, 37, 46, 47, 52, 55, 56, 57]
(Carum *copticum)*

SCIENTIFIC CLASSIFICATION
Kingdom : Plantae – Plants
Subkingdom : Tracheobionta – Vascular plants
Superdivision : Spermatophyta – Seed plants
Division : Magnoliophyta – Flowering plants

Class Magnoliopsida – Dicotyledons

Subclass : Rosidae

Order : Apiales

Family : Apiaceae (Umbelliferae)

Genus : *Trachyspermum*

Species : ammi

Table:1

Common and popular names of **TRACHYSPERMUM AMMI[55, 56, 57]** Around the world.	
Language	**Names**

ASSAMESE	Joni-guti (Katz)
BENGALI	Jowan (Katz), Juvani, Yamani (Katz)
ENGLISH	Ajawa seeds, Ajowan (Katz), Ajwain (Katz), Bishop's Weed (GRIN) (Katz), Carom (Katz).
FRENCH	Ajouan, Ajowan (Katz) , Ammi, Ammi de l'Inde, Anis de l' Inde, Sison.
GERMAN	Adiowan (Katz), Ajowan (Katz), Ägyptischer Kümmel, Herrenkümmel, Indischer Kümmel, Königskümmel.
GUJARATI	Ajamo (Katz), Yavan (Katz), Jawain (Katz)
HINDI	Ajawa, Ajmud, Ajowan, Ajwan, Ajwain (Katz), Carom (Katz), Omum (fruit) (Katz), Randhuni.
KANNADA	Ajamodhavoma, Oma omakki, Omu (Katz).
MALAYALAM	**Ayamodakam (Katz), Omam**
MARATHI	Ova (Katz), Owa, Vova.
ORIYA	Juani (Katz)
PUNJABI	Ajowan (Katz)
SANSKRIT	Ajmoda, Ajamoda, Ajmodika (Katz), Yavanaka, Yavaanika (Katz), Yavani, Ugragandha (Katz), Brahmadarbha (Katz), Deepyaka (Katz), Yavsaha (Katz)
TAMIL	Asamtavomam, Asampadam, Amam, Omam, Omam (Katz).
TELUGU	Ajumoda, Omamu (Katz), Vamu, Vayu (Katz) .

BOTANICAL SYNONYMS

Carum copticum, Carum ajowan, Ptychotis ajowan, Trachyspermum copticum

ORIGIN

Eastern Mediterranean, maybe Egypt. The main cultivation areas today are Persia and India, but the spice is of little importance in global trade. This plant grows and is largely cultivated in Eastern India, particularly abundant in and around Indore and the Nizam's dominions.

DISTRIBUTION:

Cultivated extensively in Indian gardens, Baluchistan – also in Afghanistan, Persia, Egypt, and Europe.

EXTERNAL MORPHOLOGY

An erect annual, 0.3-.09 meter high, glabrous or minutely pubescent.

Leaves- rather distant. 2-3 pinnate, ultimate segments 1.3-2.5cm. all linear. Bracts usually many, linear, sometimes divided; bracteoles 3-5, small, linear. Rays of umbel pubescent.

Flowers -pure white.
Fruit- 2mm. ovoid, muricate, sub hispid, carpals dorsally compressed, ridges distinct; vittae solitary, small.

MEDICINAL USES OF TRACHYSPERMUM AMMI
AS DESCRIBED IN
OTHER SYSTEMS OF MEDICINE [6, 7, 8, 13, 46, 47, 52, 55, 56, 57]

The ***seeds*** are hot, bitter, pungent; stomachic, appetizer, aphrodisiac, anthelmintic, carminative, laxative; cure ascites, abdominal tumours, enlargement of the spleen, piles, vomiting, abdominal pains; good for the heart and in toothache; biliousness(Ayurveda).

The seeds are bitter and hot; carminative, diuretic, galatagogue, tonic, expectorant, emmenagogue; cure weakness of limbs and paralysis, chest pains; improve speech and the eye-sight; stimulate the intestine; good for ear-boils, hiccough, vomiting, dyspepsia, kidney troubles, inflammations (yunani).

In native practice, the fruits are much valued for their antispasmodic, stimulant, tonic, and carminative properties. They are administered in flatulence, atonic dyspepsia and diarrhea, and often recommended for cholera. They are used most frequently in conjunction with asafetida, myrobalans, and rock salt. A decoction is supposed to check discharges, and it is therefore sometimes prescribed as a lotion, and often constitutes an ingredient in cough mixture.

The ***root*** is diuretic and carminative. It is used in febrile affections and in stomach disorders.
The plant is used as a stomachic in Loralai (Hughes-Buller).
The seed is prescribed for snake-bite (sushruta) and scorpion-sting (Sushruta, Haritasamhita); but it is not an antidote to either snake-venom (Mhasker and Caius) or scorpion-venom (Caius and Mhasker).
Though a source of thymol the seeds cannot be recommended as an anthelmintic. Thymol is a very effective remedy against hook-worms; but its action on other nematodes is distinctly inferior. Moreover, such large doses of it are required in the treatment of Hookworm infection that neither the seeds nor their oil can be recommended for the purpose (Cius and Mhaskar)

CHEMICAL CONSTITUENTS [6, 7, 8, 34, 36, 37,]
The essential oil (2.5 to 5% in the dried fruits) is dominated by thymol (35 to 60%); furthermore, apiece, p-cymene, limonene and a terpinene have been found. In the essential oil distilled from aerial parts (flowers, leaves) of ajwain grown in Algeria, however, isothymol (50%) was found to be the dominant constituent before p-cymene, thymol, limonene and a-terpinene. Note, however, that the name isothymol is not well defined and might refer to both 2-isopropyl-4-methylphenol and 3-isopropyl-6-methylphenol (carvacrol). (Journal of Essential Oil Research, 15,39,2003)

From South Indian ajwain fruits, almost pure thymol has been isolated (98%), but the leaf oil was found to be composed of monoterpenoids and sesquiterpenoids: 43% cadinene, 11% longifolene, 5% thymol, 3% camphor and others. (Indian Journal of Pharmaceutical Sciences, 64, 250, 2002).

A new phenolic galactoside – 3-galactosyloxy-5-hydroxytoluene-isolated from seeds along with galactose, β-methygalactoside and 2-methyl-3-glucosyloxy-5-isopropylphenol. (compendium of Indian medicinal plants: vol-4)

ANALGESIC ACTIVITY:-
Externally it is applied to relieve rheumatic and neuralgic pains. flatulent colic, Omum seeds, black pepper, ginger, each ½ drachm and cardamom 1 drachm all powered and mixed forms a useful carminative for colic etc; In cases of colic or pain in the bowels, chakradatta recommends a compound powder, made up of equal parts of Ajowan, rock salt, sonchal salt, yavakshara, and asafoetida and chebulic myrobalans. Dose is 10 to 20 grains taken with wine.

ANTHELMINTIC ACTIVITY:-
Dose is one drachm twice daily, 'the chief importance of Ajwon seeds is for production of thymol, which is a very valuable anthelmintic.' – chopra. Ajowan of the variety imported from Khorasan province of Persia is good for ankylostoma; it is taken with rock salt on empty stomach early in the morning.-(Dr. Roy).

UMBELLIFERAE[58, 60, 61, 62]
The order includes medicinal & kitchen herbs as well as dangerous & poisonous plants. In general aromatic members are tonic, stimulant and carminative; the non aromatic members are acrid and narcotic poisons. The plants are usually herbs, (rarely shrubs or trees). Leaves usually alternate, simple or compound. Flowers usually bisexual, often slightly irregular, in simple or compound umbels, rarely in head or whorls.

Fruit of 2 indehiscent dorsally or laterally compressed separable carpels(mericarps), separated by a commisure & attached to & often pendulous from a slender central axis.

Genera – 200
Species – 2700

MEMBERS OF THE FAMILY [22, 42, 43, 51]

1. Aethusa cynapium
2. Aegopodium podagraria
3. Ammoniacum gummi
4. Angelica atropurpurea
5. Angelicae sinensis radix
6. Apium graveolens
7. Asa foetida
8. Athamanta cretensis
9. Athamanta oreoselinum
10. Carum carvi
11. Cicuta maculata
12. Cicuta virosa
13. Conium maculatum
14. Coniinum pura
15. Coniinum bromatum
16. Daucus carotis
17. Eryngium aquaticum
18. Eryngium maritimum
19. Ferula glauca
20. Foeniculum anethum
21. Heracleum sphondylium
22. Hydrocotyle asiatica
23. Imperatoria ostruthium
24. Impatiens glandulifera; Hornbeam(bach flower)
25. Oenanthe crocata
26. Pastinaca sativa
27. Phellandrium aquaticum
28. Pimpinella saxifrage
29. Pimpinella anisum
30. Sanicula europeus
31. Sium latifolium
32. Sumbulus moschatus
33. Thapsia garganica
34. Thymol
35. Zizia aurea
36. Zizia italica

COMMON CHARACTERISTIC FEATURES[22]

I. Action on nervous system:

Hysteria :

Asaf: hysteria from closed room, excitement, suppression of discharges, diarrhea,
Menses : hysteria with fainting, hystero-epilepsy. Globus hystericus.
Con mac: hypochondriasis and hysteria from suppression or too free indulgence in sexual instincts.
Sumbul : hysterical mood even in men. Alternate laughter and fear. 1st excited spirit then depressed.
Zizia : hysteria and hypochondriasis. 1st excited then depressed.

Epilepsy and convulsions ;

Aethusa :epilepsy from brain troubles. Eyes turned downwards followed by weakness. Prostration and sleepiness with vomiting of curdled milk.
Asaf : hystero-epilepsy.
Cicuta virosa : violent convulsions with frightful distortion of body, loss of consciousness from centre to circumference and above downward , from concussion of brain and spine. Worms, indigestion, puerperal, dentition suppressed eruption, petitmal.
Cicuta maculata ; tetanus and clonic convulsions with consciousness and bloody foam from nose and mouth.
Oenanthae crocata: nocturnal epilepsy from sexual disorders , during menses and pregnancy. Status epilepticus.

Sium: convulsions, clonic tonic. Arms drawn to the middle of the body. fingers flexed, opistotonus. More left sided spasms, every few minutes.

Chorea :

Asaf :undulating twitching in muscles. ripper, wave like in arm muscles, front and back. St :vitus dance.
Cicuta virosa: twitching and jerking of arm especially left arm all day and in fingers .
Zizia :chorea esp. during sleep.

Fidgety:

Apium graveolens: inability to sit still or lie still in bed from feeling of fidgety
Zizia: fidgety legs.

Neuralgia:

Asaf: pains shooting outwards with extreme sensitiveness.
*Sumbu*l: facial or ovarian neuralgia in women of quick, lively nervous constitutions.
Zizia: left sided ovarian neuralgia. Migraine. Right eye more affected

Paralysis:

Conium: ascending paralysis

Tetanus:

Cicuta: titanic convulsions.

Meningitis:

Cicuta: cerebrospinal meningitis.

Debility:

Conium: nervous debility.
Eryngium aquaticum: nervous erythrism.

II. Action on glandular system producing enlargement and atrophy.

Con mac: enlargement and indurations a of glands with stony hardness from contusion or bruises . cancerous enlargement

III. Action on mucous membranes producing catarrh

Ammo gummi: acts on mm. first decreased then increased secretions. Chronic bronchitis or chronic bronchial catarrh.
Phellandrium: bronchitis, phthisis with profuse foetid expectoration.
Eryngium aquaticum: acts on mm producing thick yellow discharge from eyes, ear, nose, mouth, bowels, urethra and vagina.

IV. Action on skin producing pustular eruptions.

Aethusa: herpetic eruption on the tip of nose. Tettary eruption which bleed easily. Ecchymotic spots.
Asaf: syphilitic ulcers with chronic offensive discharge and sensitive to touch.
Cicuta virosa: eczema capitis, sycosis menti, barber's itch with lemon colored crust. eczema with no itching. impetigo or pustular eruption.
Con mac: sweat day and night as soon as one sleeps or on closing eyes. Nettle rash after exercise. Gangrenous ulcers.
Heracleum: violent itching with moist eruptions.
Imperatosa : itching and burning of skin.
Oenanthae crocata: in leprosy, icthyosis.
Hydr. Asiatica: leprosy, elephantiasis, icthyosis, psoriasis, great thickening of epidermoid with exfoliation of scales.

V. Action on urinary system.

Con.mac: intermittent flow of urine, great difficulty in voiding urine, urine flow by fits and starts.
Eryngium aquaticum: urinary disorders, strangury, difficult and frequent micturition. Renal colic.
Eryn.marit: increased flow of urine. very red . thick on standing.
Petroselinum: sudden urging to urinate. Intense itching, deep in urethra. Child suddenly seized with desire to urinate. If cannot be voided, at once jump up and down with pain. Burning, tingling from perineum thro' whole urethra.

VI. Abdominal affections:

Aethusa: intolerance to milk, vomiting in curds in cholera infantum.
Asaf: hiccough.
Apium grav: abd affections, heart burn.

VII. Side affection.

Left: asaf, eryng, sumbul, zizia, apium grav.

Right: eryng mac, phell.

VIII. Action on male and female sexual organs :
Conium: a/f sexual instinct-indulgence in both sexes. Male: BHP from excessive masturbation. Female: tumour and cancer of breast and ovaries and uterine complaints from suppressed menses. Uterine polyp, Ca of uterus and cervix, with hrge.
Asaf: labor like pain with bearing down, on pregnant women having milk in breast and for deficient milk after delivery.
Cicuta: male: testis drawn up. Female: menses delayed, painful. Mammae.
Eryng aq: weakness, emission without erection, discharge of prostatic fluid from slightest cause.
Ferula glau: violent sexual excitement in female.
Heracleum: drawing pain in penis with shooting in glans.
Oenanthae: male: seminal priapism.
Petroselinum; affection right mammae . most intolerable pain in milk ducts and lactiferous tubes b/w acts of nursing. Sticking pain thro right breast near sternum, extending to back near shoulders. Abnormal sleepiness in women after child birth.
Hydro: male impotence. Female: pruritus vagina. Heat. Ovarian pain. Labor like pain in uterus.
*Sumbu*l: ovarian neuralgia(left).
Apium grav: left ovarian neuralgia.

IX. Action on eyes :
Aeth: turned down.
Cicuta: turned up.
Oenanthae: turned up.
Pain eye within out*: asaf.*
Pain eye which presses eye inward into socket*: apium.*
Pain with numbness*: asaf.*
Syphilitic*: asaf, zizia*.
CA*: conium, cicuta.*

INDIVIDUAL DRUGS

AETHUSA CYNAPIUM [19, 23]
COMMON NAME: Fool's Parsley
PARTS USED: Whole flowering plant
HISTORY AND AUTHORITY: Proved in 1828 by Nenning, later by Hartlaub
CLINICAL CONDITIONS: Brain-fag, Cholera infantum, Convulsions, Cough, Delirium, Headache, Idiocy, Infantile paralysis, Weakness of Mind, Sleeplessness, Disorders of Stomach, Trismus

AMMONIACUM GUMMI [23]
COMMON NAME: Gum Ammoniac
PARTS USED: A Persian gum obtained from Dorema ammoniacum
HISTORY AND AUTHORITY: Proved and introduced by I. G. Jahnel in 1837
CLINICAL CONDITIONS: Appendicitis, Asthenopia, Asthma, Bronchitis, Affections of Eyes, Affections of Glands, Affections of Heart, Hydrocele, Panaritium.

ANGELICA ATROPURPUREA [23]
COMMON NAME: Great angelica
HISTORY AND AUTHORITY: Dr. Shell, M.D
CLINCAL: Alcoholism, Causes disgust for liquors

APIUM GRAVEOLENS [23]
COMMON NAME: Celery
PARTS USED: Seeds & sticks
HISTORY AND AUTHORITY: Proved and introduced by I. G. Jahnel in 1837
CLINICAL CONDITIONS: Fidgets, Headache, Heartburn, Otorrhoea, Post -nasal catarrh, Rumination, Toothache, Retention of Urine, Urticaria

ASAFOETIDA [23]

COMMON NAME: Asafoetida
PARTS USED: Tincture of the gum resin (obtained by incision from the living root).
HISTORY AND AUTHORITY: Introduced and proved by Franz, in 1822
CLINICAL CONDITIONS: Asthma, Bone diseases, Chorea, Diarrhoea, Dyspepsia, Flatulence, Headache, Affections of Heart, Hypersensitiveness, Hysteria, Disorders of Lactation, Neuralgia, Obesity, Orbital neuralgia, Ozaena, Syphilis, Tympanitis, Ulcers, Whitlow.

ATHAMANTA OREOSELINUM [1, 23]

COMMON NAME: Grundheil
PARTS USED: Fresh plant
HISTORY AND AUTHORITY: Allen's Encyclopedia Vol I
CLINICAL CONDITIONS: Headache, Indigestion, Vertigo

CICUTA MACULATA [1, 23]

COMMON NAME: Spotted Cow-bane, Beaver-poison.
PARTS USED: Root gathered in summer
HISTORY AND AUTHORITY: Allen's Encyclopedia Vol III
CLINICAL CONDITIONS: Epilepsy, Tetanus

CICUTA VIROSA [1, 23]

COMMON NAME: Water Hemlock
PARTS USED: Fresh root gathered at time of flowering
HISTORY AND AUTHORITY: Allen's Encyclopedia Vol III
CLINICAL CONDITIONS: Paralysis of Bladder, Cancer, Catalepsy, Cerebro-spinal meningitis, Coccygodynia, Concussions, Convulsions, Eczema, Epithelioma, Hysteria, Impetigo, Myelitis, Numbness, Psoriasis, Puerperal convulsions, Screaming, Strabismus, Stuttering, Tetanus, Worm complaints.

CONIUM MACULATUM [1, 23]

COMMON NAME: Spotted, or Poison Hemlock
PARTS USED: Fresh plant in flower
HISTORY AND AUTHORITY: Proved by Hahnemann
CLINICAL CONDITIONS: Asthma, Affections of Bladder, Affections of Breast, Bronchitis, Cancer, Cataract, Chorea, Diphtheritic paralysis, Galactorrhoea, Enlarged liver, Disordered menstruation, Affections of Ovaries, Peritonitis, Phthisis, Prostatitis, Ptosis, Scrofula, Spermatorrhoea, Sterility, Affections of Testicles, Tumours, Vertigo.

CONIINUM PURA [23]

COMMON NAME: Conicine
PARTS USED: An alkaloid from Conium maculatum
HISTORY AND AUTHORITY: SCHROFF
CLINICAL CONDITIONS: Illusions of Hearing, Hemiplegia, Paralysis of Tongue, Vertigo.

CONIINUM BROMATUM [1, 23]

COMMON NAME: Crystallised Bromohydrate Conicine
CLINICAL CONDITIONS: Empty sensation in Head, Inactivity, Mental apathy

ERYNGIUM AQUATICUM [1, 23]

COMMON NAME: Button Snakeroot
PARTS USED: Fresh root
HISTORY AND AUTHORITY: Proving by McClelland, Coggswell and Jones
CLINICAL CONDITIONS: Prolapse of Anus, Constipation, Diarrhoea, Dropsy, Gleet, Gonorrhoea, Haemorrhoids, Laryngitis, Leucorrhoea, Renal colic, Sexual weakness, Strabismus, Incontinence of Urine, Wounds

ERYNGIUM MARITIMUM [1, 23]

COMMON NAME: Sea Holly
PARTS USED: Whole plant, including root
HISTORY AND AUTHORITY: C. H. Mc Clelland, Coggswell and Jones.

CLINICAL CONDITIONS: Cough, Debility, Fever, Herpes, Sexual weakness, Skin eruption

FERULA GLAUCA [1, 23]
COMMON NAME: Ferula Neapolitana. Bounafa
HISTORY AND AUTHORITY: Allen's Encyclopedia Vol III
PARTS USED: Whole plant
CLINCAL: Aphthae, Diarrhoea, Slow Digestion, Haemorrhoids, Nymphomania, Pruritus vulvae.

FOENICULUM VULGARE [1, 23]
COMMON NAME: Fennel; (Germ.), Fenchel; (Fr.),
HISTORY AND AUTHORITY: Allen's Encyclopedia Vol IV
PARTS USED: Seeds
CLINCAL: Pressure in the left upper jawbone, which soon ceases (immediately).

HERACLEUM SPHONDYLIUM [1, 23]
COMMON NAME: Branca ursina
PARTS USED: Whole plant
HISTORY AND AUTHORITY: Allen's Encyclopedia Vol IV
CLINICAL CONDITIONS: Debility, Dyspepsia, Gout, Headache, Seborrhoea capitis, Pain in Spleen.

HYDROCOTYLE ASIATICA [1, 23]
COMMON NAME: Indian Pennywort
PARTS USED: Whole fresh plant
HISTORY AND AUTHORITY: Allen's Encyclopedia Vol IV
CLINICAL CONDITIONS: Acne rosacea, Constipation, Elephantiasis arabum, Favus, Gangrene after amputation, Gonorrhoea, Gout, Ichthyosis, Leprosy, Leucorrhoea, Neuralgia orbitalis, Syphilis

IMPERATORIA OSTRUTHIUM [1, 23]
COMMON NAME: Koch
PARTS USED: Infusion of root
HISTORY AND AUTHORITY: Allen's Encyclopedia Vol V
CLINICAL CONDITIONS: Affections of Skin & Stomach

OENANTHE CROCATA [1, 23]
COMMON NAME: Hemlock Drop-Water
PARTS USED: Fresh root at the time of flowering
HISTORY AND AUTHORITY: mentioned by Hahnemann in letter to Stapf in 1813.
CLINICAL CONDITIONS: Albuminuria, Apoplexy, Pain in Breast, Convulsions, Cough, Epilepsy, Hystero-epilepsy, Priapism, Puerperal convulsions, Sciatica, Speech –lost, Status epilepticus, Tetanus, Tongue swollen; ulcerated

PASTINACA SATIVA [1, 23]
COMMON NAME: Parsnip
PARTS USED: Roots of second year
HISTORY AND AUTHORITY: Allen's Encyclopedia Vol VII
CLINICAL CONDITIONS: Delirium tremens, Loquacity, Intolerance of Milk

PHELLANDRIUM AQUATICUM [1, 23]
COMMON NAME: Five-Leaved Water Hemlock, Horse-bane
HISTORY AND AUTHORITY: Proved by Nenning and Richter
PARTS USED: Fresh ripe fruit
CLINCAL: Asthma, Breasts affections, Bronchitis, Catarrh, Ciliary neuralgia, Coryza, Headache, Influenza, Intermittent fever, Nipples painful, Phthisis, Sleepiness, Soreness of tongue

PIMPINELLA SAXIFRAGA [23]
COMMON NAME: Bibernell
HISTORY AND AUTHORITY: Schelling & Berridge
PARTS USED: Fresh root
CLINCAL: Chilliness, Corns, Epistaxis, Fever, Headache, Lumbago, Stiffneck, Tinnitus

SIUM LATIFOLIUM [23]

COMMON NAME: Water-parsnip
HISTORY AND AUTHORITY: White, Phil. Med. Times, 1873
PARTS USED: Root
CLINCAL: Convulsions, Tetanus

SUMBULUS MOSCHATUS [1, 23]

COMMON NAME: Musk-root
HISTORY AND AUTHORITY: Allen's Encyclopedia Vol IX
PARTS USED: Powdered root
CLINCAL: Acne, Asthma, pain Breasts, Chorea, Diarrhoea, Epilepsy, Fainting, Palpitation of Heart, Nervous affections, Pneumonia, Hysteria, Infra-mammary pains, Neuralgia, Porrigo capitis, Spermatorrhoea, Typhoid fever, Worms

ZIZIA AUREA [23]

COMMON NAME: Meadow Parsnip
HISTORY AND AUTHORITY: E. E. Marcy, M. D., North Am. Journ., vol. iv, 1855, p
PARTS USED: Root
CLINCAL: Asthma, Brain affections, Catarrh, Chorea, Convulsions, Dropsy, Hysteria, Influenza, Leucorrhoea, Suppression of Menses, Migraine, Pleurisy, Stye

PREPARATION OF HOMOEOPATHIC MEDICINES[22, 50]

- Homoeopathic medicines intended for oral use are made either in the liquid form or in the solid form
- Substances soluble in liquid menstrum or vehicle are made into mother tinctures or mother solutions and then subsequently potentised.
- Substances that are not soluble in liquid menstrual or vehicle are converted into solid form of preparation-mother substance.
- Soluble substances may also be made into solid preparations by trituration with sufficient care to prevent deterioration.
- Similarly substances that are not soluble in liquid vehicle may also be converted into liquid potencies at a subsequent stage. (After the sixth potency in the decimal scale)
- Vehicles used for preparation of Homoeopathic medicines are Purified water, Alcohol, Glycerin and Saccharum lactis.

PREPARATION OF MOTHER TINCTURES - MODERN APPROACH [22, 50]

In every instance, the dry crude substance is to be taken as the starting point from whence to calculate its strength, and with very few exceptions, the mother tinctures contain all the soluble matter of one grain of the dry plant in ten minims of the tincture. [HPUS]

STANDARD UNIT OF MEDICINAL STRENGTH [22, 50]

According to modern approach, the tinctures should be of uniform strength. While Hahnemann observed that plant moisture is a part of medicinal substance, the modern view is that the plant moisture constitutes merely as a vehicle or menstrum and forms no part of medicinal substance. In most cases of medicinal preparations, (in modern method) with the exception of few drugs, the drug strength is of uniform standard i.e.10% or 1/10 or 1X

Purpose of modern method is to avoid double standard made by Hahnemann and to secure uniformity in strength (drug power) of all preparations and attenuations; thereby making dilutions and triturations of equal degree correspond in medicinal strength.
A distinctive feature of the modern method is that, instead of using the fresh juice of the succulent plants only, it provides using of a drug substance as a whole.

GENERAL PRINCIPLES [22, 50]

After procuring the crude drug substances, the first step will be to qualify them for medicinal use, which involves two forms or conditions, the liquid form and the solid form, i.e. the liquid tinctures solutions and the triturations.
All the drug substances soluble in alcohol, purified water or glycerine, will have to be properly made into tinctures or solutions and next their attenuations or dilutions. Aqueous mother solutions are prepared from substances which are soluble in water, but are insoluble in alcohol.

Tinctures of alcoholic solutions of solids or semi-solids are made of various varieties of drug substances, which are partially or wholly soluble in alcohol. They embrace all plants and different parts of plants, e.g., roots, stems, rhizomes, bulbs, barks, leaves, fruits, seeds, gums, resins, balsams, alkaloids etc.
Substances like camphor, iodine, phosphorus and volatile oils etc., which are volatilized on triturating, they are better prepared as tinctures.

MOISTURE CONTENT [22, 50]

Moisture content of the plant is the amount of juice contained in a plant. Fresh succulent plants and other substances containing water should be treated according to the fundamental rule that the dry crude drug is taken as the starting point from whence to calculate the strength of the tincture. Hence first take a suitable quantity of the fresh plant or part thereof and estimate the moisture content. Only the proportion of anhydrous drug is taken in calculation.

Hahnemann considered the moisture as a part of the active constituents of the plant and preparations were based on this consideration. But the strengths of the tinctures varied due to variability of moisture contained in the same plant at different times, seasons, and conditions of growth, procurement and storage. As such, moisture content or water content of each crude sample is ascertained before hand.

ESTIMATION OF PLANT MOISTURE [22, 50]

- First take a suitable quantity of fresh plant or other substance containing water. Next he is to weigh the same, and dry it by the gentle heat of the water bath, till the weight scale shows no further loss of weight. Then from the difference of weight between the fresh and dried drug substance, he will get the weight of the moisture evaporated.
- This dry crude drug substance, secured on evaporation, will be taken as the unit of strength; the tincture will be made to represent one part of this dry substance in each ten parts of the finished tincture with a few exceptions.
- After determining how much quantity of dry substance is present in the given quantity of the fresh moist materials, this is to be compared with the respective tincture formula for this drug, as specified in the pharmacopoeia. If its weight be below from that prescribed as the standard in the said formula, add sufficient purified water to the moist magma to equal the standard weight. But, if the weight of the moist drug substance or magma is above from the standard weight, as specified in the formula, then by cautious evaporating in a moderate temperature, enough of the drug moisture will have to be reduced, so that the weight equals to the standard weight.

MACERATION [22, 50]

1) It is the process of removing the active principles from a drug by allowing the latter to remain at room temperature in contact with the solvent (menstrum) for several days, with frequent agitation.
2) This process is preferably utilised for the treatment of large quantities of drug substances, needing much time for the extraction of their medicinal principles. e.g., for the cases of mucilaginous or gummy substances and those substances having much viscid juice preventing the rapid penetration of alcohol into the mass.

PROCESS [22, 50]

The plant moisture is ascertained, and the quantity of menstrum calculated accordingly.
If the drug substance can be finely sliced or reduced to pulp in a glanced mortar, this should be done; otherwise it may be used whole or as directed in the respective monographs of the drug.
Having ascertained the excess or deficiency of water, place the material reduced to magma, or in a natural state, if irreducible, into a macerating jar (preferably made up of a stainless steel or glass) or a wide-mouthed bottle. Add the prescribed, pre-calculated quantity of solvent, making it cover if possible the entire mass. The jar or bottle should be carefully stoppered or sealed to prevent evaporation, placed in cool dark room of ordinary temperature, free from dust, odour, heat or direct sunlight and agitated every day.
The time necessary for the extraction is variable and it is safe to allow the process of maceration to continue from 2-4 weeks, according to the nature of the material.
Thereupon decant the clear supernatant liquid and press out the residue through a press or a clean linen cloth or bag.
Measure the whole fluid and if found less than the calculated quantity, add the fresh menstrum to the mass and press it again so as to make the required volume. Having allowed the mixed products to stand twenty-four hours, filter.

PERCOLATION [22, 50]

It is a process of extracting the soluble constituents of a drug and preparing the mother tincture by the passage of a solvent (menstrum) through the powdered drug contained in a suitable vessel called percolator for a definite period of time as per directions specified in Pharmacopoeia.
This method is adopted for the extraction of dried drugs, dry vegetable substances and other organic (animal) substances.

The process of percolation is considered under the following steps

1) Comminution- Before percolating the drug, it is essential that it be reduced to particles of more or less fineness. The degree of size reduction will depend on the botanical structure of the drug.
2) Moistening the drug- Before packing the drug in the percolator, it is moistened with the menstrum.
3) Packing of the drug-Take a clean sterilized percolator and if it is not provided with a stop-cork, insert a cork in the lower orifice. Evenly lay the bottom with layers of powdered glass or sand, pressing it down gently with a broad, flat cork fixed on the end of a glass rod. Over this, lay the moistened pulp of the dried substance and evenly press it more firmly, especially when the mass is coarse and particularly when the menstrum is strongly alcoholic, taking care that the mass is compact and not too tight but free from fissures and empty spaces. Cover the upper surface of the mass with a disc of filter paper or a thin layer of finely powdered glass or fine white sand.
4) Percolation-After calculating the amount of the medicinal substance, a quantity of the mentsrum is taken equaling about ten percent in excess of the amount required by the formula as given in Pharmacopoeia monographs. While holding down the mass by means of the flat cork, pour the menstrum, in divided quantity upon the contents until the mass is covered, allowing the fluid to run gently down the glass rod so that the glass or sand may not be displaced. Close the percolator with the lid to prevent dust from contaminating. Close the valve or stopcock as soon as the fluid begins to drop and allow it to stand for 24 hours or longer, according to the nature of the contents. Next allow the fluid to pass through the percolator into the receiver, drop by drop, regulating it by means of the stop-cock or cork so as not to allow the flow to exceed 10-30 drops in a minute. The men strum should be cautiously added so as to maintain a surface above the powder, thereby preventing access of air. Continue this until the requisite quantity of the menstrum has passed through the percolator and the last drop from it has been received in the receiver.
5) Termination of percolation-Once the last drop is received, add sufficient quantity of menstrum to cover the mass in the percolator and close the mouth of the percolator with the lid to prevent further percolation. This arrangement is allowed to stand for six hours. Open the stop cork and allow the whole fluid to percolate in the receiver. The residue left after the process of percolation, called marc retains a considerable amount of the moisture. Remove this marc; press it strongly to extract the remaining tincture from it. Add sufficient menstrum to make the required volume.
6) The resulting tincture is then filtered through white filter paper or absorbent cotton, directly into glass bottles that are tightly stoppered and preserved in a dark, cool place and marked with the sign '0' (1/10). This represents the strongest liquid preparation made directly from the medicinal substance and also showing the proportion of drug substance that the mother tincture represents.

MATERIALS AND METHODS

PROVING PROTOCOL
THE TECHNIQUE

SELECTION OF THE DRUG
MOTHER TINCTURE PREPARATION
STANDARDISATION OF THE MOTHER TINCTURE
POTENCY PREPARATION

SELECTION OF THE PROVERS
INCLUSION CRITERIA
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GUIDELINES TO PROVERS
NEED FOR CONTROLS

THE EXPERIMENT
GUIDELINES FOR THE RECORDING OF SYMPTOMS

WAYS OF MINIMIZING ERRORS
POST TRIAL MEDICAL EXAMINATION OF THE PROVER

DATA COMPILATION, INTERPRETATION AND FORMATION OF MATERIA MEDICA OF TRACHYSPERMUM AMMI
INCLUSION OF THE SYMPTOMS IN THE RUBRICS OF THE SYNTHESIS
REPERTORY
SYMPTOMS OBTAINED DURING THE PROVING OF TRACHYSPERMUM AMMI ARRNGED IN SCHEMATIC ORDER

PROVING PROTOCOL

Clinical trial Design
Homoeopathic drug proving are similar to the European Community (EC) guidelines for clinical research.

Clinical Investigators
Proving Director:
Dr.Esmail Sait, Principal (Rtd.)
Government Homoeopathic Medical College, Kozhikode.
Proving Supervisor/ Coordinator**/Master prover:**
Dr.Ajith kumar.D.S, B.H.M.S

Methodology
Data Collecting : Diary/journal format (Prover's Day Book Proforma)
Study Design : Single group with placebo run-in
Method of Binding: Single-Blind
Controls : Intra-individual controls, placebo run-in, placebo controls

Medications
The medication used in this homoeopathic drug proving was prepared in the Department of Pharmacy, Government Homoeopathic Medical College, Thiruvananthapuram as liquid in 3X and 30C potencies.

Subject Population
There were 40 subjects: 18 men and 22 women 18to 40 years. 35 subjects received the drug, 5 received placebo.

THE TECHNIQUE
The technique used in this study is Single blind Randomized control trial using crossover technique during consecutive proving of a higher potency after proving a lower potency. In the single blind randomized control trial, the person proving the drug does not know whether he is a prover or a control. Only the master prover knows whether the drug Trachyspermum ammi or placebo (as control) was given to a person considered for proving. In the crossover technique, the controls taken during the 3X proving are made as provers for the 30C potency and vice versa.
The project director of the proving program was **Dr. Esmail Sait**, Principal (Rtd) Government Homoeopathic Medical College, Kozhikode. He provided the directions about the program and decided upon the drug and potencies that were to be proved.

Dr. Remadevi Amma, Reader, Department of Pharmacy, Government Homoeopathic Medical College, Thiruvananthapuram supervised the drug preparation and potentisation procedures.
After preparation of the drug, I was the Investigator/ coordinator of the investigation who monitored the responses in the prover's day book proformas. I took the cases of the provers before the proving and maintained a close contact with the provers from the start of the proving program. Utmost attention was paid towards the changes noted in the health of the provers. The provers day book was monitored every fifth day and the elaboration book was made.

SELECTION OF THE DRUG
After discussion with my guide and experts in different fields, the drug Trachyspermum ammi was selected due to its proved action in the traditional Hindu system of medicine, Ayurveda.
The pharmacognosical identification was done by the department of pharmacognosy, Ayurvedic Research Institute, Poojapura.
The alcoholic extraction of the crude drug prepared Homoeopathically by the methods of maceration in the Pharmacy Lab of Government Homoeopathic Medical college, Thiruvananthapuram.

Proving was done with standard preparation of only 3X and 30C potencies of Trachyspermum ammi. Potencies were given in clean phials, as medicated No. 40 Globules. Identical phials of globules saturated with dispensing alcohol were used as placebo.

MOTHER TINCTURE PREPARATION

100 ML of Tachyspermum ammi mother tincture was made using ;
10 gm of dried Tachyspermum ammi seeds
18.5 ml of distilled water(to compensate for the moisture content)
81.4 ml of alcohol

The drug substance is made into a pulp (magma). The pulp was placed in a macerating jar, made of glass. 81.5 ml of alcohol (pre calculated) was added to cover the whole mass of drug substances. 18.5 ml of distilled water was added. The macerating jar was now carefully corked or sealed in order to prevent the evaporation of the menstrum(alcohol) . The jar was kept in a cool dark place, free from dust, odour, heat or direct sunlight. The temperature is better with in the range of 15 C- 20 C. The jar was kept for 2 to 4 weeks and was shaken every day.

STANDARDISATION OF THE DRUG FOR MOTHER TINCTURE PREPARATION

ORGANOLEPTIC EVALUATION

Table: 2

Seeds	BROWN
Smell	AROMATIC
Taste	bitter and hot
Touch	Hard
Moisture Content	6 %

STANDARDISATION OF THE MOTHER TINCTURE

Table: 3

Colour of tincture	YELLOWISH BROWN
Smell	AROMATIC
PH	8.9
Specific gravity	0.920
Precipitation test	Gives reddish brown colour with 4% NaOH

The moisture content was first found out after heating the drug Trachyspermum ammi in a crucible.
Weight of crucible =62gms.
Weight of drug substance and crucible before heating =72gms
Therefore initial weight of drug substance =10gms.
Weight of drug substance and crucible after drying by heat = 71.4gms.
Therefore final weight of the drug after drying = 9.4gm
Moisture content in 10gm of drug substance = 0.6 ml
% of moisture = 0.6 / 10 X 100 = 6 %

POTENCY PREPARATION

The decimal potencies were prepared by taking one ml of the previous potency and succussing 10 times with 9 ml of alcohol. Similarly the centesimal potencies were made by taking one drop of the previous potency and succussing 10 times with 99 drops of alcohol.

SELECTION OF THE PROVERS

Apparently healthy individuals were taken as provers. Consent was obtained from them before proving. Among the provers both males and females were included, to get the changes produced in the sexual sphere. 40 persons were included in the study out of which 35 were provers and five were controls. They were of different age groups ranging from 18-40 years.

INCLUSION CRITERIA

- The subject must be healthy in the sense that they do not show any psychic or physical symptoms and do not consider themselves to be in need of medical treatment.
- The subjects were between 18 and 40 years, so that bodily degeneration that comes with age will not be a serious factor.

- The subject must be well acquainted with Homoeopathic methodology, and must have a good knowledge of the symptomatology found in Homoeopathic Materia Medica. This is necessary for the subject to fully appreciate the particular deviations that may manifest during the proving.
- The subject must be able to lead a life which is as normal as possible during the course of the proving so as to allow a definite time for sleep, for working, for eating etc.
- The subject must be intelligent enough to properly appreciate and record the subjective symptoms as deviations from his normal condition of life. These subjective symptoms are of utmost value.
- Honesty is a pre-requisite of a good prover, for he must be very careful to record all phenomena from the very beginning of the trial.
- Did not undergo any major life changes (moving, getting married or divorced etc.) and continued the usual patterns and habits of daily life.
- Did not engage in any elective medical treatments (like surgery or dental procedures) during the proving.

EXCLUSION CRITERIA

- The subject should not be hysterical or anxious person. This is necessary because such individuals display a high incidence of placebo effect.
- Those who note down a lot of emotional symptoms, too many symptoms in these realms confuse the final result.
- Those who suffer from hypersensitivity diseases such as asthma, hay fever, allergies, food hypersensitivities etc.
- Those who obviously omitted to recall symptoms or who exhibited superficiality in reporting.
- Those under allopathic treatment or Homoeopathic drugs, using contraceptive pills, intrauterine devices.
- Pregnant and lactating women
- Subjects who had surgery within the past 6 weeks.
- Subjects under the age of 18 years.

ETHICAL CONSIDERATIONS

- The subject or prover should be in such a mental, physical and legal state as to be able to exercise fully his or her power of choice.
- Consent should be as a rule, obtained in writing from the subject, however, the responsibility always remains with the investigator or the investigating team. It never falls on the prover even after consent has been obtained.
- Nature and purpose of drug proving must be explained to the provers.
- Proving should never be done in toxic doses, for toxic symptoms we must rely solely on the reports of accidental proving recorded in toxicological literature.
- Investigator or investigating team should discontinue the proving if in his/ her/ their judgment, the proving if continued, be harmful to the subject.

PRECAUTION

Care was taken that nothing which may ruin the health be proposed for proving.

PRE-TRAIL MEDICAL EXAMINATION OF THE PROVER.

As it is nearly impossible, now almost impossible to find perfectly healthy provers, a format was designed to find perfectly healthy provers, a format was designed to minimize any pre-existing pathological symptoms. Case taking of the provers was done before the proving to ensure the safety of the volunteer, to make sure that they are healthy enough to take part in the proving and to give a base line of the actual state of health and symptoms. This is done in a pre-trial medical examination Proforma. The physical and clinical examination along with the constitutional, mental, emotional and physical traits was recorded in the form. A routine lab investigation (CBC, Hb%, ESR) along with blood sugar and serum cholesterol level was assessed. Lab investigations confirm the fitness of the prover. The pre observation period of one week was made before the intake of remedy.

GUIDELINES TO PROVERS

All the provers were given the following guidelines before starting the proving.

- To have a normal routine life.
- To avoid overexertion both mentally and physically.
- To avoid any other medication during the course of the proving.
- To have a simple diet with minimum spices and to avoid consumption of alcohol and smoking.
- To avoid articles in diet which have established medicinal properties in the crude state?
- To avoid exposure to articles which may possibly act as an antidote to the drug like camphor, smoke from mosquito coils etc.
- To report everyday to the proving master or write down all the details by themselves.
- To mention any probable exciting or precipitating factors. Also note down any article knowingly or unknowingly taken by the prover that may interfere with the proving.
- To avoid communication of symptoms obtained to other provers.

NEED FOR CONTROLS:

To avoid influences & bias on the part of the provers & the investigator which can significantly modify drug responses and interfere with the interpretation of therapeutic efficacy of a drug, controls were required. During proving 3X potency thirty five were kept as provers & five as controls using the single blind randomized control technique. On the other hand, during the 30C proving, the controls of 3X were made provers & few of the provers of 3X potency were made controls, in accords to the crossover technique used during the single blind randomized control Homoeopathic pathogentic trial of the drug Trachyspermum ammi.

The details of the provers & controls are given as appendix.

THE EXPERIMENT

Drug proving was started after getting clearance from the ethical committee. The objective of the ethical committee was to safe guard the rights, safety and the well being of all study subjects. The Chairman, member secretary, constitutes the ethical committee members including a legal advisor (details given in Appendix IV).Drug proving protocol along with the available literature of the drug under consideration was provided to the ethical committee before drug proving. Consent for the proving experiment was provided by the ethical committee.

Randomized single blind controlled trial was adopted. 40 people were considered for the proving of new drug Trachyspermum ammi. The 40 provers were divided into two groups, provers and control. Out of these 40 provers, 5 were kept as controls. Controls were later used as provers when the second potency was given (Cross over Design). Proving was done over a period of 6 months. Drug was given in 3X and 30C potencies. Four globules (of No. 40 size) were considered as a single dose. If the first dose of the medicine produced no effect, enough time had been allowed to be sure that the prover was not sensitive to it, the next best thing to do was to create sensitiveness to it, which was attempted safely by administrating a dose three times daily for a week and if no symptoms arise, the dose is to be increased to 4 pills 2 hourly.

Each prover was provided with sufficient number of pre designed prover's day book proforma (Appendix V) to record all the signs and symptoms, subjective and objective, they might observe during the course of proving. The provers were directed to report to the proving master every day, and hand over the recorded symptomatic data. The proving master elaborates each symptom, by writing down the sensation, location, modalities, concomitants and extensions (Symptom elaboration proforma Appendix VI).

In the event of any provers developing any signs/ symptoms, administration of drug was stopped immediately and was not re-administered as long as the signs and symptoms persisted. During the course of proving, the proving masters took care to ascertain and record atmospheric changes, alteration in sleep and eating habits of the provers to ensure evolution of the true drug pathogenesis.

The trials were started by using 3X and controls and later using the cross over single blind randomised technique, 30C and controls were proved. In the case of those provers proving both 3X and 30C potencies, a wash out period of 2 weeks was given to neutralize the effect of the previous potency (3X) and then 30C was administered.

GUIDELINES FOR THE RECORDING OF SYMPTOMS

1. Adherence to the protocol, honesty and sincerity were pre requisites both on the part of investigators and the provers.
2. The provers must make day book entries at least 3 times a day to prevent even minor memory lapses.
3. Each entry should record even the slightest deviation from the subject's normal state.

4. Intensity and the duration of the symptoms should be carefully recorded.
5. Possible exciting cause should be recorded meticulously.
6. A detailed record of the order of appearance of all the symptoms should be made.
7. Analysis of the symptoms such as location, sensation, duration and the modifying characters of the symptoms, together with concomitants should be properly recorded.
8. Recording should be done without biased ideas about the out come of the proving.

WAYS OF MINIMIZING ERRORS

- The subjects are assured that the information will be treated as confidential.
- There should be frequent meeting between investigators and subjects, to record the elaboration and clarification of each symptom.

POST TRIAL MEDICAL EXAMINATION OF THE PROVER

After completion of the experiment all the provers were again subjected to an examination. All the physical and mental symptoms were again recorded. Along with this similar lab investigations that were carried out at the time of the premedical examination were also done. This is known as post-trial medical examination proforma. (Appendix II)

DATA COMPILATION, INTERPRETATION AND FORMATION OF MATERIA MEDICA OF TRACHYSPERMUM AMMI

When the proving trials conclude, all the daily records of the provers were collected, and all symptoms which represent deviations from the prover's normal health were listed.

A comparison of the day book entries was made to the pre-trial and post-trial medical examination reports. The symptoms generated by the placebo subjects (controls) were deleted from the records, all remaining symptoms were collected and a Materia Medica is formed. During the compilation of data, care was taken to record it in the words of the provers.

Those signs and symptoms, which were distinctly experienced by the provers, are arranged in a schematic manner (according to Boricke's Materia Medica)

INCLUSION OF THE SYMPTOMS IN THE RUBRICS OF THE SYNTHESIS REPERTORY

The synthesis repertory is one of the most widely used repertories by the homoeopaths in the recent times. The repertory is linked to the radar project. After recording the symptoms obtained during the proving and the creation of the Materia Medica for Trachyspermum ammi, the name of the drug is now included under the rubrics in the synthesis repertory, edition 8.1 using the abbreviation **Trach.am** for representing the drug **Trachyspermum ammi.**

SYMPTOMS OBTAINED DURING THE PROVING OF TRACHYSPERMUM AMMI ARRANGED IN SCHEMATIC ORDER

Grading of symptoms according to their intensity that occurred in the prover
Mild : +
Moderate : ++
Severe : +++
The no. of provers in which a particular symptom was obtained is included after that symptom in brackets.

SCHEMATIC ARRANGEMENT OF SYMPTOMS RECORDED DURING THE DRUG PROVING OF TRACHYSPERMUM AMMI
3X POTENCY

The symptoms obtained after the proving of the 3X potency of Trachyspermum ammi are recorded in the anatomic- schematic pattern. The intensity of symptom as observed by the prover is given by the '+' sign and the Prover number of the particular prover having this symptom is given in brackets. (For Prover Numbers, please refer Appendix I)

MIND:-

· Irritable. + (6, 20)
· Anger ++ (4, 13, 25)
· Forgetful (27, 32)

VERTIGO:-

§ Vertigo (4, 9, 14)
< standing,
< exertion (4)
< turning head (9)
> rest (14)
> lying down with nausea.

HEAD:-

Headache, left sided, bursting type of pain++ (8, 20, 28, 35)
> rest.
Headache; forehead, +++ (1, 2, 4, 8, 16, 19, 23, 24, 29, 36, 37)
< motion
< exertion (19)
< rising from lying
< left side (8, 16, 19, 23, 24, 29)
< stooping. (29)
> rest (16, 19, 23, 24, 29, 36)
> sleep. (2)
Sensation of heaviness (8, 12, 23, 24, 29, 35, 36)
< stooping,
< Hungry
< morning to noon (24)
> eating,
> sleep in evening. (12)
Acne on the right temporal region. Oozing serous bloody fluid. (27)

EYES:-

Pain around eye balls. Pressing pain (4, 8, 12)
< stooping, (8, 12)
< reading (8, 12)
> rest (4)

NOSE:-

Sneezing +++(4, 12, 20, 24, 27, 35)
< night,
< stooping
< cold air
< fanning++ (4)

· Fever with nasal blockage.+ (12)
· Sneezing with watery discharge from nose followed by thick purulent discharge from the next day. (12)
· Postnasal discharge with nasal blockage. (12)
· **W**atery discharge from both nostrils. (24, 34)
· Stoppage of nose (27, 34)
< afternoon (27)
· Irritation of nose with tendency to rub. Acrid, yellowish white in nature. (27)
· Pustule inside the nose, with itching of surrounding areas.
< night. (27)

FACE:-

· Pimples (1, 2, 4, 11, 12, 18, 20, 26, 27, 29, 30, 31, 32, 36)
§ in front of nostril (12, 18, 20, 24)
§ right side of cheek. (11, 30)
§ face, both cheeks coming in crops. (4, 36)
§ forehead & cheeks with no pain. (1, 32)
§ left cheek, tip of nose with pus & pain on touch. (12)
§ right side of forehead.++ with itching. (2, 32)
§ Acne over right cheek & left cheek, congestive, painful & indurated. (24, 26)
§ Acne on the tip of nose, With stinging pain, indurations+++. (27, 31)
· Lymph node enlargement of submandibular region. ++ (12)

THROAT:-

· Throat pain(1, 4, 11, 20, 23, 24, 27, 29, 30, 35)

- started in the right going to left. (11)
  - < morning,
  - < swallowing. (11)
  - > warm drinks (27)
    - § with white mucus from throat on rising. (30)

·Crawling sensation in throat causing cough. (4)
·Sensation of a lump in throat,
< left side. (24)
· Rawness in throat ++, (1, 27, 30)
· Tingling in throat,
> expectoration. (27, 29)
· Throat irritation along with fever++. (35)
· Throat irritation causing cough which is dry.
< cold +++. (1, 20, 23)
Fever with throat pain, left sided (20)
· Reddish blister on the posterior wall of pharynx. (27)
· Irritation of throat with roughness of voice.+++ (27)

STOMACH:-

§ Increased appetite. (8, 12, 20, 26, 27, 31, 36,)
Nausea with increased salivation. (4, 26, 30)
Burning pain in the chest along the course of esophagus.
< empty stomach & while eating.
> drinking cold water. (2, 12, 26)
Loss of appetite. (6, 29)
All gone empty sensation in stomach,
> eating. (8)

ABDOMEN:-

- Abdominal pain, (2, 3, 4, 6, 8, 9, 11, 12, 20, 24, 25, 27, 30, 31, 36)
  - § left hypochondrial region +++ (4)
  - § epigastric region. Burning type of pain. (30)
  - § not relieved by eating.
  - § crampy pain in the lower abdomen with desire for stool.
- Abdominal pain with distension (6, 11, 25, 30)
- Abdominal pain with desire to defecate & urinate
  - < sitting,
  - > lying down,
  - > eating. (25)
- Dull aching pain in the left hypochondrium & right hypochondrium.
  - > lying down +++. (25, 30)
- Pain over umbilicus with sweating.(25)
- Flatulence;
  - > After stool +++ (2, 8, 11)

RECTUM:-

- Urging for stool (11, 12, 18,)
- Passing stool difficult (11)
- Constipation; large, hard stool with much straining. Decreased thirst. (6)
- Diarrhoea with slight discomfort in abdomen.+++ (8, 24, 27, 36, 40)
- Urge for stool, tenesmus; +++ cannot finish sensation.
  - < morning after eating.
  - > After stool. (27)

STOOL:-

- Loose watery stool +++ (8, 24, 27, 36, 38, 40)
  - § loss of appetite and desire for warm drinks,
  - § with prostration
  - § with weakness and chilliness ++

URINE:-

- Burning in Urethra during & after urination (from 4pm) (11)

RESPIRATORY:-

§ Dry cough. (2, 23, 26, 34,)

BACK:-

§ Backache & aching pain in limbs,
< evening. ++ (12)
§ Stiffness of neck,
< bending backwards (27)

EXTREMITIES:-

· Weakness; esp. in groins, arms & legs feel weak. (11)
· Aching pain over both left lower extremity
> by rubbing,
< 7 to 11am. (35)
· Pain over finger joints of both hands.(11, 12, 24, 27, 35,)
< Extension,
< lifting weight.
> rest. (24)

SLEEP:-

· Sleep disturbed with restless, wants to turn around in bed. (11)
· Sleepiness (29)

SKIN:-

§ Eruptions (12, 20, 23, 24, 31, 32, 36,)
§ Vesicular eruption over shoulder (left), surrounded by reddish discolouration. (20)
· Vesicular eruption on anterolateral aspect of thighs- left side. With slight rise of temperature. Slight pain & irritation with itching. (32)
· Blackish discolouration over healed region of vesicular eruption. (32)
· Itching eruption appeared on the dorsum of right foot+. (23)
· Vesicular eruption over left axilla,
< touch.++ (24)

FEVER:-

· Fever (1, 2, 4, 12, 20, 23, 27)
· Sensation of chilliness alternate with heat. Aching of whole body
< standing,
> lying down. (4, 12)
· Fever with chilliness.
< fanning,
< draught of cold air,
< exertion, motion.
> drinking warm water. +++,
> rest. (4, 20, 23)
Thristless during fever.++
· Chilliness with rise of temperature. (1)
· Fever with nasal blockage.+ (12)
· Fever with chilliness. Feels drowsy & sleepy. (2)
· Fever: with great chilliness+++ even in hot climate.
o Increased thirst,
o weakness & prostration.
o With Headache ++, with sensation of heaviness.
o Bodyache +++.
o Reduced appetite & bitter taste in mouth. (23)
· Fever with chilliness,
o no thirst,
o Wants to cover whole head.
o Chill
< night (27)

GENERALS:

§ Weakness of whole body. (20, 34,)

GENERAL MODALITIES:-

AGGRAVATION

< after 11am (11,
< slightest motion (20,34)
< morning
< exertion
< cold air
< stooping

AMELIORATION

> lying down. (20,)
> after stool
> rest
> eating
> sleep

SYMPTOMS OF THE 30C POTENCY OF TRACHYSPERMUM AMMI

The intensity of the symptom as observed by the prover is given by the '+' sign and the Prover number of the particular prover having this symptom is given in brackets (For Prover Numbers, please refer Appendix I)

MIND:-

- Mind: thinks that she is suffering from serious disease.+ (20)
- Fear of death. + (20)
- Wants Company. + (20, 30**)**
- Irritable. +++ (6, 11, 17, 20)
- Anger + without cause. .
  < sleep (4, 25)

HEAD:-

- Headache (1, 4, 6, 8, 12, 14, 16, 19, 23, 30, 31, 36, 37)
- left sided with pain at the root of nose.
  < slight noise,
  < rising up in morning,
  < stooping,
  < talking,
  > hot application++
  > pressure. (4, 30)
- over both temples,
  < moving the head.
  > sleep.
- frontal region,
  < stooping, slight exertion
  > sleep, open air
- forehead++ (6, 14, 16, 30, 36)
- occipital with radiation to frontal region.
  < Talking,
  > lying, rest.
- Bursting type of pain. (19, 23)
- Headache with heaviness in forehead & vertex, root of nose. (9, 24, 30, 39)
  - over frontal & over supra-orbital region.(9, 30, 39)
  > lying down (1, 24, 30)
- Sensation of throbbing carotids.(6, 14)
- Headache:; pain whole head with heaviness of head & eyes.(36)
- Headache all over the head, left side.
  < Evening,
  > sleep.(6, 8, 14, 31, 23)

EYES:-

- Watery discharge from eyes. (4)

- Itching & redness of left eye.++ (12)

EARS:-

- Pain in left ear. (1)

NOSE:-

- Watery discharge from nose (4, 6, 19, 32)
- Stoppage of nose ++ (20, 24, 27)
- Sneezing ++ (6, 9, 19, 24, 20, 27, 32)

MOUTH:-

- Bleeding from gums on waking. Spongy enlarged gums. (30)
- Dryness of mouth(16)

FACE:-

- Pimples (1, 2, 4, 6, 18, 23, 24, 30, 31, 36)
  - on forehead, both cheeks. Painful & indurated.+++ (1, 4, 30)
  - left cheek & forehead.

  < touch. (2, 6, 24)
  - tip of nose with redness & over forehead. (18, 23, 24)
- Pustule over the tip of nose with pain. (18, 31, 36)
- Oedema under the eyelid++, right side. (18)

THROAT:-

- Throat pain +++(1, 4, 12, 23, 26, 32)
- with radiation to ears. (4,) with soreness. (1, 23)

  < taking food & drinks. (23, 32)
  - with chilliness
- Itching in throat.

  > warm drinks. (4, 26)

STOMACH:-

- Increased appetite. (8, 12, 20, 26, 27)
- Loss of appetite (1, 10)
- Thirst less, (2, 4, 9, 12, 16, 23, 31, 37)
- Burning pain in the pit of stomach. (2, 39)
- Heartburn (7, 18, 27, 36)
- Eructation (3, 18, 31)
- Nausea with dislike for food. (18)
- Nausea with vomiting,

  > after vomiting. (3)

ABDOMEN:-

- Abdominal pain +++(1, 2, 3, 8, 17, 18, 25, 27, 36)
  - colicky type +++;

    < sitting,
    < morning,
    < pressure,
    < after food,
    < lying on left side,
    > lying down,
    > turning to right side,
    > bending double. (3, 18, 25)
- Abdominal pain over hypogastrium, epigastrium. (3, 8, 18, 25, 27)
- Crampy lower abdominal pain

  > pressure. (2)
- Flatulence & heart burn

  < early morning. (11, 12, 18, 21, 22, 31, 36)

RECTUM:-

- Constipation. (3, 12, 18, 31)
- Diarrhoea ++; stool watery with much flatus.

  < after eating & drinking. (2, 3, 8, 25)

- § loss of appetite
- § with prostration

STOOL:-

- · Loose watery stool+++ (2, 3, 8, 25, 31, 36)
- · Hard stool with difficulty in passing (18, 31)
- · Brownish(3, 12, 31)

RESPIRATORY:-

- § Cough dry (24)
- § Cough with scanty expectoration.
  - < talking. (18)

BACK:-

- § Backache; over thoracic region below the scapula. (12)
- § Stiffness of neck.
  - < slight movement,
  - < turning to right,
  - > rest. (24)

EXTREMITIES:-

- § Pain in calf muscles, crampy pain. (1,)
- § Pain in finger joints, middle finger with redness. (18)

SLEEP:-

- § Sleepiness. (1)

SKIN:-

- § Itching vesicular eruption developed in the legs. (12, 17)
- § A boil on the Right arm with itching & pain. (32, 36)

FEVER:-

- § Fever: (5, 9, 12, 20, 23, 26, 27, 32, 37, 39)
  - o with great chilliness+++ even in hot climate.
  - o Thirst less (12, 27, 39)
  - o weakness & prostration.(9, 12, 26, 27, 32)
  - o Headache ++with sensation of heaviness.
  - o Bodyache+++.
  - o No sweat.
  - o Reduced appetite & bitter taste in mouth. (23)

GENERALS:

- § Weakness with desire to lie down. (1, 12, 20)
- § Bodyache with chilliness. (18)
- § sensation of coldness(23)

GENERAL MODALITIES:-

AGGRAVATION

- · early morning.
- movement
- after food
- pressure
- sitting

AMELIORATION

- · Rest
- lying down
- warm drinks
- sleep
- lying down
- open air

INCLUSION OF THE SYMPTOMS IN THE RUBRICS OF THE SYNTHESIS REPERTORY (EDITION 8.1)

The symptoms obtained after the extensive proving of the drug Trachyspermum ammi, both the 3X as well as the 30C potency is now included under the different rubrics of the Synthesis Repertory (Edition 8.1) edited by Dr. Frederick Schroyens and published by B. Jain Publishers, New Delhi. The presentation is divided into the different chapters as given in the Synthesis repertory. The page number under which the particular rubric representing a corresponding symptom of Trachyspermum ammi occur is given just after the rubric is presented. New rubrics which are not already present in the Synthesis is written with an * (astrix) at the end of the rubric.

3X POTENCY

MIND:-

Mind – Irritability (165)
Mind – Anger (9)
Mind – Forgetful (119)

VERTIGO:-

Vertigo – Exertion on (275)
Vertigo – standing while (281)
Vertigo – turning head (283)
Vertigo – rest, amel (281)
Vertigo – Nausea, with, lying (279)

HEAD:-

Head – Pain-sides-left (353)
Head – Pain-bursting-rest amel (365)
Head – Pain-forehead (339)
- motion on (342)
- rising – from lying*
– left side (340)
– stooping from (343)
– rest amel*
– sleep amel (343)

Head-heaviness (305)
- stooping (307)
- hungry during*
- morning (306)
- eating after (306)
- Sleep amel (307)

Head – eruption, pimples, temples*

EYE:-

Eye- pain- pressing (453)
- around eyes (455)
- stooping agg (454)
- rest, amel (454)

NOSE:-

Nose- sneezing (562)
- night (563)
- cold air (563)
- stooping*
- fanning*
- coryza with (563)

Nose – discharge- thick (541)
- purulent (540)
- posterior nose (542)

Nose- obstruction – afternoon (551)
Nose – irritation (549)
- with tendency to rub nose*

FACE:-

Face- eruption – pimples (585)
Face – pimple – nostril, tip (586)

Face – pimple – cheeks*
Face – pimple – forehead (585)
Face – swelling – submandibular glands (618)

THROAT:-
Throat – pain – right extending to left (712)
Throat – pain – morning (712)
Throat – pain – swallowing (714)
Throat – pain – drinks, warm amel (713)
Throat – crawling (701)
Throat – lumb, sensation of (708)
Throat – rawness*
Throat – irritation (708)
Throat – blister, posterior wall of pharynx*

STOMACH:-
Stomach- appetite – diminished (737)
Stomach- appetite – increased (738)
Stomach- nausea – salivation with (773)
Stomach- pain – burning, fasting (783)
- eating after(783)
– burning, fasting (783)
- drinks cold amel (782)
Stomach- emptiness – eating – not amel (748)
Stomach – thrist – chill during (797)
Stomach – thristless – heat during (799)

ABDOMEN:-
Abdomen – pain – hypochondrium (841)
Abdomen – pain – sitting (838)
Abdomen – pain – lying amel (836)
Abdomen – pain –eating amel (838)
Abdomen – flatulence (822)
Abdomen – distension (817)

RECTUM:-
Rectum – urging – frequent (928)
Rectum – constipation (894)
Rectum –diarrhoea (897)
Rectum – urging – stool after amel (828)

STOOL:-
Stool – watery (941)

URETHRA:
Urethra – pain – burning urination during & after (977)

COUGH:
Cough – dry (1123)

BACK:-
Back – pain – cervical region (1247)

EXTREMITIES:-
Extremities – pain – aching – lower limbs (1426)
Extremities – pain – fingers (1404)
- extension*
- lifting weight*
Extremities – eruption - shoulder (1337)
Extremities – eruption - thighs (1343)
SLEEP:-
Sleep – sleepiness – day time (1577)

Sleep – sleeplessness restless with*(1585)
Sleep – sleeplessness wants to turn around in bed*

SKIN:-
Skin – eruptions (1696)
Skin – eruptions vesicular (1710)
Skin – eruptions painful (1703)
Skin – eruptions – itching (1701)

FEVER:-
Fever – fever, heat in general (1661)
Fever – chill with (1666)
- fanning agg*
- cold air*
- warm water amel*
- night agg*
- weakness*
- body ache*
- headache*
- rest amel*

GENERALITIES:-
Generals – weakness – (1895)
Generals – cold – cold air– (1751)
Generals – morning – (1731)
Generals – motion agg – (1826)
Generals – lying amel – (1820)
Generals – rest amel – (1864)
Generals – stooping agg*
Generals – eating amel – (1771)
Generals – rest amel – (1864)
Generals – rest –sleep after (1872)
Generals – sleep amel – (1872)
Generals – stool amel – (1874)

INCLUSION OF THE SYMPTOMS IN THE RUBRICS OF THE SYNTHESIS REPERTORY (EDITION 8.1) 30C POTENCY
MIND:-
Mind – Irritability (165)
Mind – Anger (9)
Mind – company desire (40)
Mind – fear death of (124)
Mind – fear disease of incurable of being (126)

HEAD:-
Head – Pain-sides-left (353)
Head – Pain-talking while (334)
Head – Pain-warmth amel (337)
Head – Pain-noise from (330)
- pressure amel (331)
Head – Pain-bursting-rest amel (365)
Head – Pain-temples (355)
Head – Pain-occiput (347)
Head – Pain-pulsating (390)
Head – Pain-forehead (339)
- motion on (342)
– left side (340)
– stooping from (343)
– sleep amel (343)

Head-heaviness (305)
- stooping (307)
- Sleep amel (307)

EYE:-
Eye- lachrymation (441)
Eye-itching (439)
Eye – discoloration – red (429)

EAR:-
Ear – pain – left (508)

NOSE:-
Nose- sneezing (562)
Nose- obstruction – afternoon (551)
Nose- coryza (533)

MOUTH:-
Mouth – bleeding – gums (624)
Mouth – dryness – (637)

FACE:-
Face- eruption – pimples (585)
Face- eruption – pimples pain (585)
Face – pimple – nostril, tip (586)
Face – pimple – cheeks*
Face – pimple – forehead (585)
Face- swelling – eyes under (617)

THROAT:-
Throat – pain (712)
Throat – pain – swallowing (714)
Throat – itching (708)

STOMACH:-
Stomach- appetite – diminished (737)
Stomach- appetite – increased (738)
Stomach- pain – burning, (782)
Stomach – thristless (799)
Stomach – eructation (752)
Stomach – heart burn (759)
Stomach – nausea (766)
Stomach – nausea – vomiting with (775)
Stomach – thristless – heat during (799)

ABDOMEN:-
Abdomen – pain(832)
Abdomen – pain – hypogastrium (844)
Abdomen – pain – sitting (838)
Abdomen – pain – pressure agg (837)
Abdomen – pain – lying amel (836)
Abdomen – pain – bending double amel (834)
Abdomen – pain –eating amel (838)
Abdomen – pain –after food agg*
Abdomen – flatulence (822)

RECTUM:-
Rectum – constipation (894)
Rectum –diarrhoea (897)
Rectum –diarrhoea – after eating & drinking (897)

STOOL:-
Stool – watery (941)
Stool – hard (944)

Stool – brown (932)

COUGH:
Cough – dry (1123)

BACK:-
Back – pain – dorsal region – scapula (1250)
Back – stiffness – cervical region (1293)
EXTREMITIES:-
Extremities – pain – leg calf (1419)
Extremities – pain – fingers (1404)
Extremities – eruption – upper limbs - boils (1334)
Extremities – eruption – lower limbs - vesicles (1334)

SLEEP:-
Sleep – sleepiness (1577)

FEVER:-
Fever – fever, heat in general (1661)
Fever – chill with (1666)

- weakness*
- body ache*
- headache*

GENERALITIES:-
Generals – weakness – (1895)
Generals – morning – (1731)
Generals – motion agg– (1826)
Generals – lying amel – (1820)
Generals – rest amel – (1864)
Generals – eating agg– (1771)
Generals – rest amel– (1864)
Generals – sleep amel – (1872)
Generals –pressure agg– (1854)
Generals – air –open amel (1738)

RESULTS AND ANALYSIS [33]

DISTRIBUTION OF PROVERS ACCORDING TO AGE

TABLE: 4

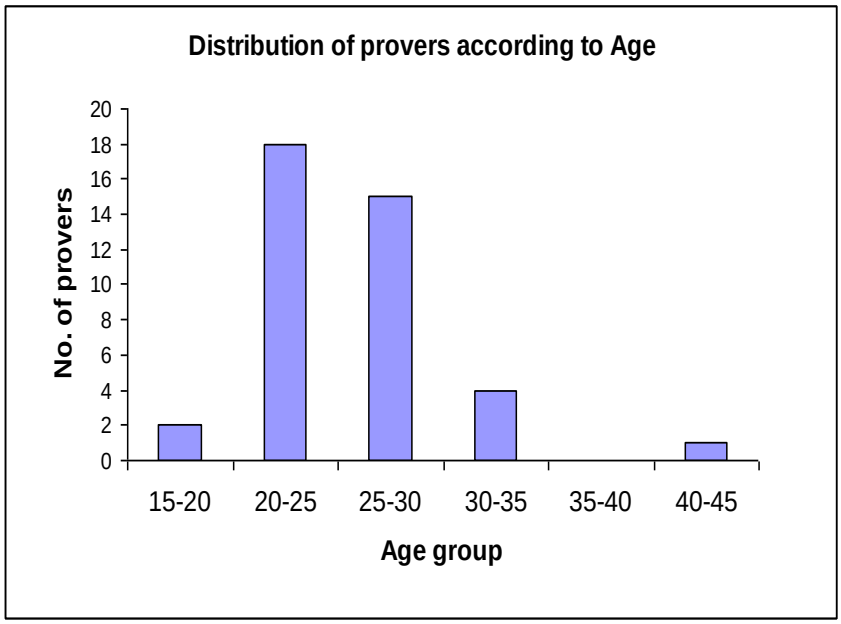
AGE GROUP	NUMBER OF PROVERS
15 - 20	2
20 - 25	18
25 - 30	15
30 - 35	4
35 - 40	0
40 - 45	1

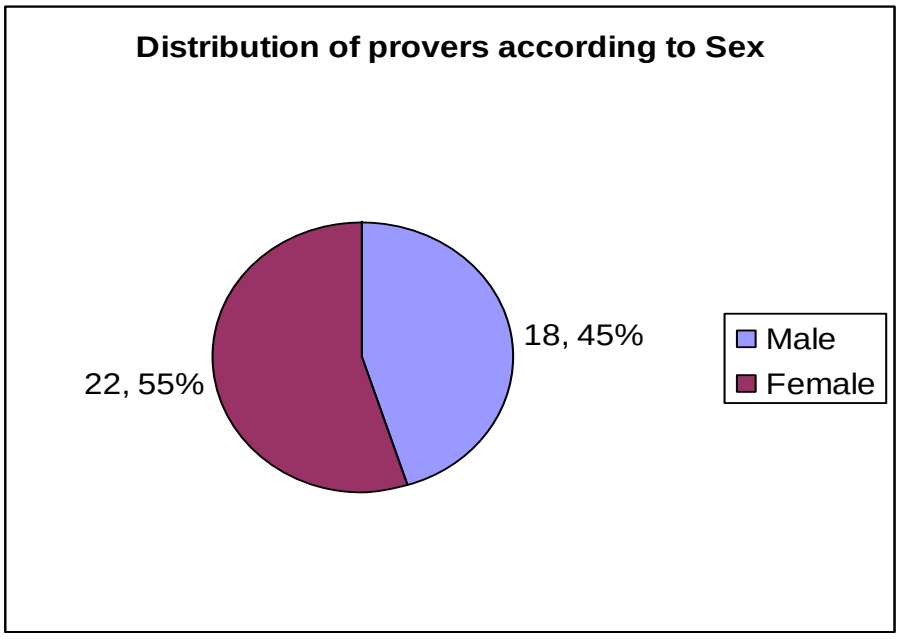
DISTRIBUTION OF PROVERS ACCORDING TO SEX

TABLE: 5

SEX	NUMBER OF PROVERS
MALE	18

FEMALE	**22**



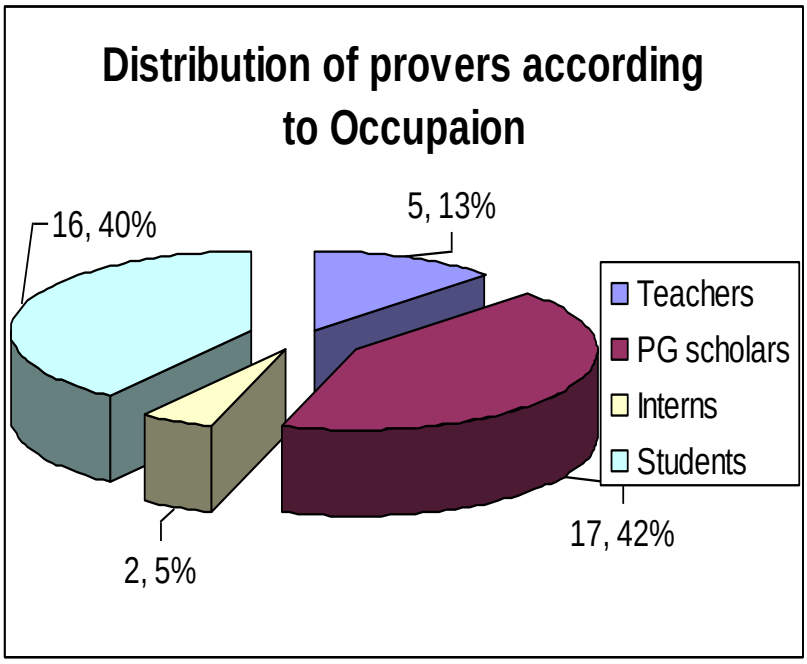


DISTRIBUTION OF PROVERS ACCORDING TO THE OCCUPATION

TABLE 6

OCCUPATION	NO OF PROVERS
TEACHERS	05
PG SCHOLARS	17
INTERNS	02

STUDENTS	16


Distribution of provers according to Occupaion
16, 40%
5, 13%
Teachers
PG scholars
Interns
Students
17, 42%
2, 5%

DISTRIBUTION OF PROVERS AND CONTROLS IN 3X POTENCY PROVING

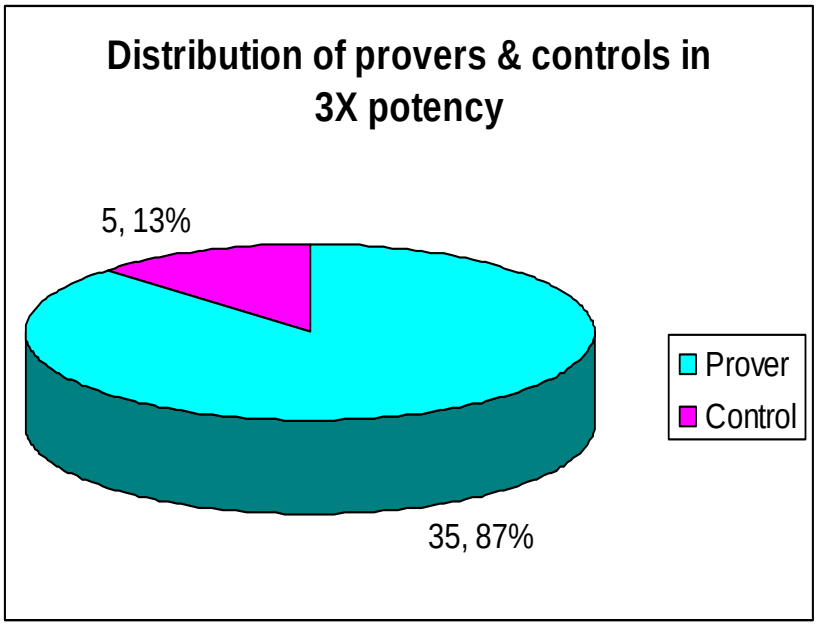
TABLE: 7

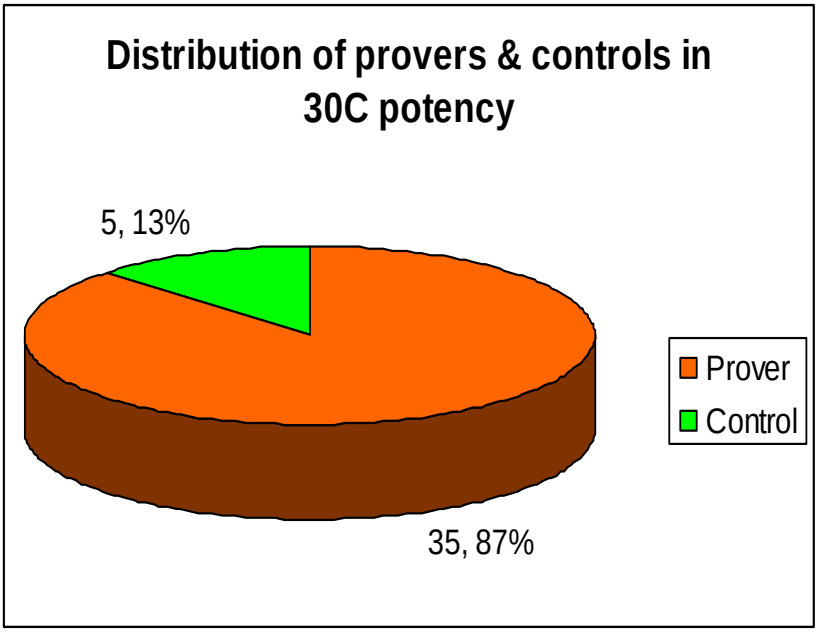
POTENCY	CATEGORY	
	PROVER	CONTROL
3X	35	5

DISTRIBUTION OF PROVERS AND CONTROLS IN 30C POTENCY PROVING

TABLE: 8

POTENCY	CATEGORY	
	PROVER	CONTROL
30C	35	5




Distribution of provers & controls in 30C potency
5, 13%
35, 87%
Prover
Control

DISTRIBUTION OF PROVERS ACCORDING TO THE MAJOR SIGNS AND SYMPTOMS DURING THE 3X POTENCY PROVING

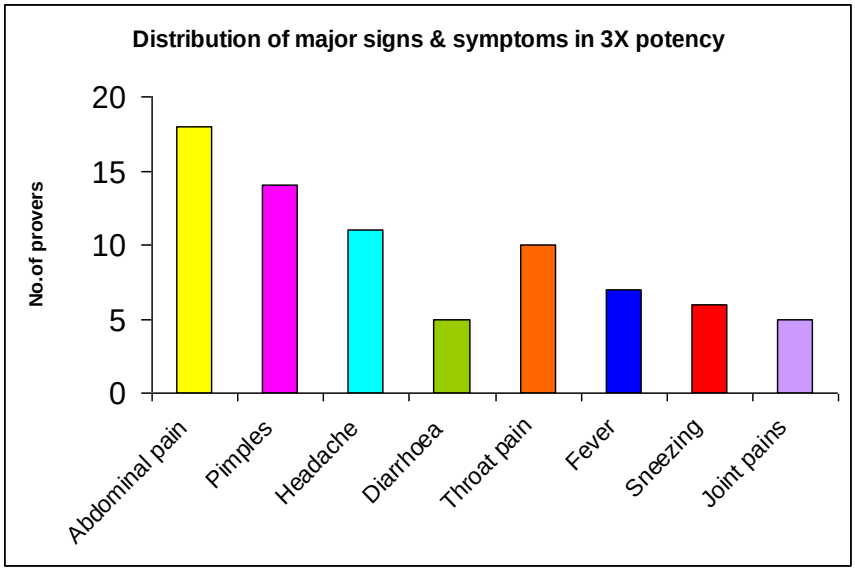
TABLE:9

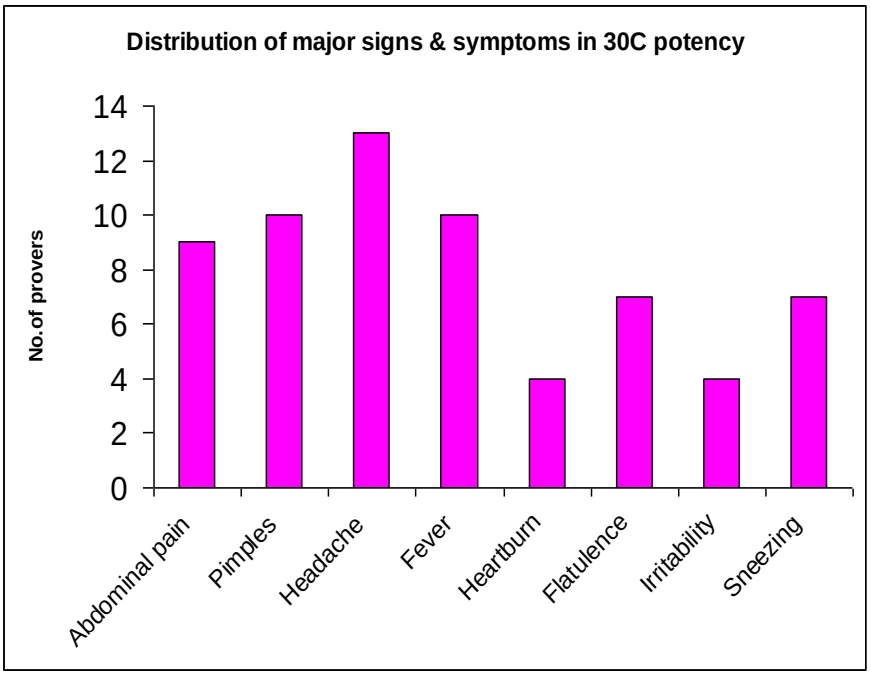
MAJOR SIGNS AND SYMPTOMS	NO OF PROVERS
Abdominal pain	18
Pimples	14
Headache	11
Diarrhoea	05
Throat pain	10
Fever	07
Sneezing	06
Joint pains	05

DISTRIBUTION OF PROVERS ACCORDING TO THE MAJOR SIGNS AND SYMPTOMS DURING THE 30C POTENCY PROVING

TABLE: 10

MAJOR SIGNS AND SYMPTOMS	NO OF PROVERSS
Abdominal pain	9
Pimples	10
Headache	13
Fever	10
Heartburn	4
Flatulence	7
Irritability	4
Sneezing	7





OBSERVATIONS AND DISCUSSIONS

Forty volunteers were considered for the Homoeopathic drug proving of the new drug Trachyspermum ammi. The forty volunteers were divided into two groups '**provers'** and '**controls**'. 22 of the volunteers were doctors, (4 - teachers & 18 – PG scholars) 16 were homoeopathic medical students and two interns. Volunteers were in the 18-40 age group and the maximum volunteers were in the20-30 age group.

The 3X was the first potency considered for proving. Of the forty people, 35 were considered under the '**prover'** category and 5 under the '**control'** category. The prover control ratio was 7:1.

It could be observed that the site of action of remedy mostly centered on the head, GIT, throat and skin. The main symptoms were abdominal pain, flatulence, diarrhea, heart burn, headache, pimples, throat pain, fever, joint pains, sneezing & irritability.

It could be observed that out of the thirty five people, eighteen developed abdominal pain, fourteen had pimples, eleven had headache, five had diarrhea, ten had throat pain, seven had fever, and six had joint pain & five sneezing in 3 X potency. Out of the thirty five people nine developed abdominal pain, ten had pimples, thirteen had headache, ten had fever, seven sneezing, seven had flatulence, four had heart burn & four had irritability in 30C potency.

During the proving of the 30C potency, all the controls of 3X were given the 30C potency and some of the people who were in the prover category of the 3X proving were made controls. The 30C proving helped in reconfirming many of the symptoms received after the proving of 3X thus increasing the validity of these symptoms. Mental symptoms are less during the proving of 3X potency when compared to 30C potency.

Twenty two of the provers were homoeopathic physicians. The well described and conscientiously observed signs and symptoms confirm the fact that "Physicians are the best provers" because they already know all the facts about the proving and are very observant to the smallest changes in health occurring in the mind and body.

The master prover described a lot of symptoms thus confirming the fact that the master prover should play the part of the prover in the proving experiment. The master prover could better describe the symptomatology which he had received from the different provers while proving on himself.

The symptomatology of trachyspermum ammi could be described well through the proving of this drug by forty provers using the single blind randomized control trial technique. This new drug, Trachyspermum ammi

is now introduced into the Homoeopathic Materia Medica after a thorough homoeopathic drug proving. Reproving and clinical verification of Trachyspermum ammi is to be done for proper inclusion of it into the homoeopathic Materia Medica.

After referring the symptoms to the repertory Synthesis (edition 8.1), the whole symptomatology, described after the proving of 3X and 30C potencies, is converted into rubrics and the drug is included under the corresponding rubric in the repertory. If no rubric is found corresponding to its symptom, a new rubric is formulated and is added to the Synthesis repertory edition 8.1.

CONCLUSIONS

The proving of the 30C potency developed more symptoms on the mind than the 30X potency.
It was observed that the site of action of the remedy mostly centered on the Head, GIT, Throat and Skin. The main symptoms were abdominal pain, flatulence, diarrhea, heart burn, headache, pimples, throat pain, fever, joint pains, sneezing & irritability.
The 30C proving helped in reconfirming many of the symptoms received after the proving of 3X thus increasing the validity of these symptoms.
The symptomatology of Trachyspermum ammi could be described well through the proving of this drug by forty provers using the single blind randomized control trial technique. This new drug, Trachyspermum ammi is now introduced into the Homoeopathic Materia Medica after a thorough homoeopathic drug proving. Now a reproving and a clinical verification of the therapeutic action of Trachyspermum ammi are to be done for proper inclusion into the homoeopathic Materia Medica.

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