

## LITERATURE EVIDENCE FOR EXTERNAL THERAPIES IN SIDDHA TOXICOLOGY MEDICINE

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### ABSTRACT

Siddha system of toxicology is an indispensable division in treatment of various types of poisoning since ancient days which deals with antidote against different kinds of poison. Siddhars have contributed a number of treatises on antidote against poisonous bites. It is imperative to insist that we should be familiar with the remedies to meet any emergency situation. Treatment of poisoning in Siddha system both internal and external medicine. Many external therapies widely used in noticeable and unnoticeable poisons. Whenever any reptile, insects or animal bites a person he would be in a conundrum. He cannot take any internal medication due to anxiety on those

emergency conditions external therapies are practiced in Siddha system of toxicology also in allopathic system for recovering him from life threatening. Major role of external therapies in treatment of poisoning is elimination of poison before entering in circulation. The aim of this article is to expound the method of external therapies performed in treatment of poisoning which mentioned in Siddha literatures and it may contribute to current research in traditional system.

**KEYWORDS:** Siddha, Toxicology, External therapies

### 1.0 INTRODUCTION

Toxicology is the scientific discipline concerned with the detection, evaluation and prevention of the toxic substances. It has a key role in the development of new drug. Mother Nature has created innumerable living-beings and non-living beings of which animals, birds, reptiles, plants, herbs, metals, poisonous, substance, mineral, salts and other organic

substances are useful in different ways to human being who are considered supreme creation. According to siddhantic doctrines, everything found in nature has to be utilized for medicine, the properties which may cause unwanted effect which may be neutralized or eliminated it means that every raw drug used for medicinal preparation are purified before processing.<sup>[1]</sup> Every substance is unsuitable for health if it is not purified and freed from its toxic substances. Therefore it is vouch that all sources derived from nature are more beneficial to our health if their toxicity is removed. Several herbs and herbal products commonly used to improve health or to treat the illness sometime it's reported with toxic effect because of unpurified medicinal preparation or consumption of drug above the recommended dosage. A poison is a substance which if introduced in living body, or brought into contact with any part thereof, will produce ill-health or death, by its constitutional or local effect or both. The poisonous substances which causes fainting, act in three ways. Some affect the nervous system, especially the brain, whereas some others act on the spinal cord, the poisonous substances are classified in siddha system based on three humours viz., vatham, pitham, kabham.<sup>[2]</sup>

## 2.0 MATERIALS AND METHODS

### 2.1 Diagnosis of poisoning in living

There is no single symptoms, no definite group of symptoms, which are absolutely characteristic of poisoning. The following conditions should arouse suspicion of poisoning.<sup>[3]</sup>

1. The symptoms appear suddenly in a health person.
2. The symptoms appear immediately or within a short period after food or drink.
3. Some people don't notice the insect and may not aware of bite or sting until one or more symptoms are emerge.
4. When several people eat or drink at the same time from same source of poison. All suffer from similar symptoms.

### 2.2 Types of poisoning

Regarding to poisoning, chemical can be divided into three broad groups agriculture and industrial chemicals i.e. Organo phosphorus poison, DDT, aluminum phosphate. Drugs and health care products, and biological poisons i.e., plant and animal sources. Toxins are poisons produced by organism in nature and venoms are toxins injected by a bite or sting (this is exclusive to animals). The different between venom and other poison is the delivery

method. Animal poison delivered subcutaneously is also called venom. Other than according to the mode of action the poison classified as corrosive poison, irritants, mechanical poison.<sup>[3]</sup>

### 2.3 External therapies in treatment of poisoning

According to siddha text *Theran tharu* the siddha system of medicine contains 32 type of external medicine and 32 types internal medicine were practiced in treatment of diseases. Some of the external therapies performed in treatment of poisoning are

- a. Poochu (Poultice)
- b. Pukhai (Fumigation)
- c. Kalikkam (Eye drops)
- d. Nasiyam (Nasal instillation)
- e. Keeral (incision)
- f. Ottradam (Fomentation).

#### a. Poochu (Poultice)

This is the external application of leaf juices or oils, after gently heating them. This method is carrying out to treat the many biological poisoning. According to siddha text *Vida aarudam*, in treatment of viper snake (*pori viryan* type of viper based of siddha text) poisoning powder of the whole plant of *Aristolochia bracteata* is soaked in latex of *Euphorbia antiquarum* and kept in an earthen pot for seven days and then dried. 35g. of that powder is taken in vessel and 325 ml of neem oil is added and boiled until the paste form then applied on the head of the victim.<sup>[4]</sup>

*Nigella sativa*. Linn (*Karunchirakam*) and *Pipper nigrum* (*Milagu*) equal quantity adding with butter milk then boiled for some time after that applied over the bitten spot for treatment of scorpion bite.<sup>[4]</sup>

Juice of *Pergularia daemia* (*Veli parutthi*), *Gymnema sylvestres* (*sirukurinjan*) mixed well and applied it over the wasp bite best treatment for symptoms after the wasp bites.<sup>[5]</sup>

A substance which applied over the injured skin in order to cure it, the external application of herbal juice absorbed on skin and reduces the poisonous effect quickly. Certain properties of the drug important for them to be effective topically.<sup>[7]</sup>

**b. Pukai (Fumigation)**

The poison of the snakes vitiates the blood and causes the mortality. It's prevented by the following fumigation methods.<sup>[6]</sup>

Piper nigrum (*Milagu*), Acorus calamus (*vasambu*), Allium sativum (*Garlic*), Zingiber officinale (*Dry ginger*), camphor (*Karpooram*), Capsicum annum (*chillies*), Tamarind indica (old tamarind) and sodium chloride (*Salt*) in equal parts and grind these in a pit-grinding stone with cynanchum viminale (*Kodi kallu*) milk juice for one full day and apply this on ribbon like pieces of cloth already soaked and dried in cynanchum viminale milk and roll it. Light one end and then put off the fire and allow the smoke to be inhaled through nostrils. This will bring back the life of victim by viper bite.<sup>[4]</sup>

Yellow arsenic (*Thalagam*) is ground well and kept in earthen vessel and closed with a one-holed earthen cover. Fire is ignited and put off after sometime. The victim is made to inhale the hovering smoke for treatment of eighteen types of Rats.<sup>[4]</sup>

Lungs offer a large surface area for absorption of drugs. Volatile liquids and gases are given by inhalation, solution of drugs can be atomized and the fine droplets are inhaled. These inhaled drugs and vapors may act locally on the pulmonary epithelium and mucous membrane.<sup>[7]</sup>

**c. Kalikkam (eye drops)**

Required amount of common salt will be mixed with water, adding more and more salt until the salt become unable to liquefy, on that time salt adding will be stopped after some time the salt water used as eye solution for treatment of scorpion bite.<sup>[2]</sup>

Root of Abrus precatorius, Linn (*Kundrimani*) powdered well and mixed with baby urine or goat urine after some time it will be used for treatment snake and scorpion bite in form of eye drops.<sup>[8]</sup>

Seeds of the Alangium salvifolium (*Azhinjil*) and Moringa oleifera (*Murungai*), Piper nigrum. Linn (*Milagu*), purified Zinc sulphate (*Pal thuttham*) and Cupric sulphate (*Thurusu*) these drugs are taken equal quantity and ground well with egg white and lemon juice make it pellet form dried well in sun light. It's milled in by adding few drops child's and then the solution of urine put into the both eyes for treatment Indian cobra bite.<sup>[5]</sup>

Ferula asafetida(*perungayam*), yellow orpiment(*Aritharam*), sulphur(*Ganthagam*), Borax(*Vengaram*), Rock salt(*Induppu*), sublimate of mercury (*Valai rasam*), Brassica juncea(*Kadugu*) these above ingredients are taken in equal quantity and ground well with the juice of Luffa amara(*Pei peerkam*). It's applied as an ophthalmic application for treatment all type of snake bites.<sup>[6]</sup>

The drugs can be delivered to ocular tissue as eye drops and eye ointment act locally via corneal epithelium then distributed to the systemic circulation. In this type administration of drugs are faster and elimination of excess drug through nasolacrimal drainage.<sup>[7]</sup>

#### **d. Nasium (Nasal instillation)**

Some prepared medicines are used as nasal drops dissolving them breast milk or urine of the child known as nasiyum.

Piper nigrum (*Milagu*), Ferula asafetida (*perungayam*), Hydragyrum (*Sootham*), Rock salt (*Induppu*) taken in equal quantity crush well by adding drops child's urine make it solution and then used as nasal drops for treatment of all type of snake poison.<sup>[6]</sup>

Momorinda charantia (*Mithipagal*) leaves, Garlic (*Poondu*), Acorus calamus(*Vasambu*) are taken equal ratio and these drugs are powdered well-kept into the white cloth squeeze the content two drops put into the each nostril's for treatment of rat bite.<sup>[6]</sup>

Leucas aspera(*Thumbai*) leaves, Indigofera tinctoria(*Avuri*) leaves, Ferula asafetida(*perungayam*), Acorus calamus (*vasambu*), Piper nigrum(*Milagu*) taken equal quantity and grind well by adding child's urine make it liquid solution and few drops of solution put into each nostrils and ears for treatment of all kind of bite poisoning.<sup>[6]</sup>

The drugs of the nasal drops absorbed through the nasal mucosa insufflated through nose. The drug can go locally or systemic effects. Molecules of the drugs can be transferred quickly across the single epithelial layer directly to the systemic circulation.<sup>[7]</sup>

#### **e. Keeral (Incision and Venesection)**

Keeral or incision helps to remove the accumulated pus blood using a sharp probe the sharp probe used for this called kombi. Keeral is made only after the abscess softens and ready to discharge the pus and venesection is done to remove toxins from snake bite and other envenomation Its also known as Kudori maruthuvam.<sup>[9]</sup>

The vertex of the scalp made into small incision and juice of Tranquebar genderussa (*thavasi murungai*) is applied on the incisional area to treat the 16 types of viper and pregnant centipede.<sup>[10]</sup>

A small incision is made by a sharp probe is used on affected area and the fluid or blood is eliminated immediately to treat the poisoning.

A small incision is made below the nail root or finger grip to remove toxicity. It reduces the subcutaneous spreading of poison.<sup>[10]</sup>

#### **f. Ottradam (Fomentation)**

It's defined as application of hot and cold substance so applied, normally done with materials heated to appropriate temperature. A warm application of fomentation or sweating necessarily follows. Induced by heat from different source it brings out sweat on the skin. The application done by hot packs of pulses, cereals husk, lime, brick powder, leaves.<sup>[9]</sup>

Calotropis gigantea(*Erukku*), strychnos nux-vomica(*Etti*), civet(*Punugu*), Alangium salvifolium(*Azhinjil*), Feronia elephantum(*Vila*), Bassica longifolia(*Iluppai*), sterculia foetida(*Pinaari*), citrullus colocynthis(*Vari kumatti*) the roots of the above ingredients are taken in equal quantity, pounded with urine, fried and used for fomentation. A few drops may be instilled into the nostrils and also rubbed on the whole body for treatment of all snake bite poisons<sup>[4]</sup>

Indigofera tinctoria (*Avuri*), Capparis aphylla(*sen katthari*), Albizia lebbeck(*Vagai*), Jatropha curcus(*Kattaamanakku*), Aloe indica(*Kattrazhai*), the roots of the above plants are taken in equal weight and ground with vinegar, fried in an earthen vessel and wrapped in a cloth. Fomentation is given from the head to toe for antidote the snake poison<sup>[4]</sup>

Equal parts of the root of Bombax ceiba (*Elavam*), Zingiber officinale(Dried zinger outer layer removed), Flower of Gymnema sylvestre(*sirukurujan*), leaves of Curculigo orchiodes(Nilappanai) and the leaves of tephrosia purpurea(*Kollukai velai*) are ground well and fried in earthen vessel. These ingredients are wrapped in a cloth and fomentation on the bitten part. After sometime, the same may be tied on the bite site for the treatment of monkey bites.<sup>[4]</sup>

### 3.0 DISCUSSION

Many external therapies are practiced in our siddha system based on siddha literatures treating many chronic disease and poisonous bites. Route of administration plays vital role in treating many diseases. There are 32 types of Internal medicines also well practiced in our system, treating diseases and management of poisoning by both internal and external therapies couders the hustle recovery from the illness of the patient.

### 4.0 CONCLUSION

External therapies can be done in major measure with locally available resources and therefore is available as well as affordable to the entire society. The constituents used in external therapies mostly plants likely roots and leaves. There are many effective external therapies mentioned in siddha literatures but few of them practiced till now. It needs lot of researches under integration of medicinal and non-medicinal therapies in one roof towards worldwide reception.

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