

# “SIDDHA MANAGEMENT FOR SELECTED POISONOUS BITES”

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## ABSTRACT

Siddha system of medicine deals with removing of toxin from the body since ancient era. In Siddha Toxicology is study of poisonous substance and management of toxic effect. In this research, data collected from siddha management for poisonous bites by *attai* (Leech), *mara-attai* (Millipede), *kabala poochi* (Caterpillar), *aranai* (Skink) and Fish. They were 16 plants, 02 minerals and only one animal product listed in siddha treatment process. In results; *Piper nigrum* (*milaku*) and dry *Zingiber officinalis* (*chukka*) were used most common in 02 prepared medicines and other 14 plant raw materials were list only one remedy. In taxonomical aspect; 08 different taxonomies found and Rhizomes-04, Leaves and Roots-03, Fruits -02 and others are only one ingredients used for treatments. Mica (*abrakam*) and salt used in mineral and urine as animal product of management by prepared medicines such as Karkam, Juice, Chooranam, Oil, Nasiyam and External Application to above poisonous bites. Therefore, this research concluded as to need a clinical assessment of siddha management in modern scientific way and introducing to global level in future.

**Keywords:** Siddha Toxicology, poisonous bites, plants, minerals, animal product, prepared medicines.

## I. INTRODUCTON

Siddha system of medicine deals with removing of toxin from the body since ancient era. In Siddha Toxicology is study of poisonous substance and management of toxic effects. In this research, data collected from siddha management for poisonous bites by *attai* (Leech), *mara-attai* (Millipede), *kambali poochi* (Caterpillar), *aranai* (Skink) and Fish.

**Leeches** are segmented parasitic or predatory worm-like animals that belong to the phylum Annelida and comprise the subclass Hirudinea. They are closely related to the oligochaetes, which include the earthworms, and like them have soft, muscular, segmented bodies that can lengthen and contract. The majority of leeches live in freshwater environments, while some species can be found in terrestrial and marine environments. The best-known, such as the medicinal leech, *Hirudo medicinalis*, are hematophagous, attaching themselves to a host with a sucker and feeding on blood, having first secreted the peptide hirudin to prevent the blood from clotting. A minority of leech species are predatory, mostly preying on small invertebrates. Almost 700 species of leech are currently recognised, of which some 100 are marine, 90 terrestrial and the remainder freshwater.

Leeches were used in medicine from ancient times until the 19th century to draw blood from patients. In modern times, leeches find medical use in microsurgery, while hirudin is a valuable drug for some blood-clotting disorders.

A leech bite is no different when it comes to skin allergies. Some of the symptoms of the skin allergy are:

- Rashes on the skin
- A lot of itching
- The profusion of water-like blood
- Swelling of the infected part etc.

Well, some of the most common causes of skin allergies are:

Skin exposed to external factors like sun, dust, dry weather, getting rubbed against clothing etc. Itching and scratching the wound (Even if you try to control it a lot). **Millipedes** are a group of arthropods that are characterized by having two pairs of jointed legs on most body segments; they are known scientifically as the class Diplopoda. Most millipedes have very elongated cylindrical or flattened bodies with more than 20 segments, while pill millipedes are shorter and can roll into a ball. Although the name "millipede" derives from the Latin for "thousand feet", no known species has 1,000; the record of 750 legs belongs to *Illacme plenipes*. There are approximately 12,000 named species classified into 16 orders and around 140 families, making Diplopoda the largest class of myriapods, an arthropod group which also includes centipedes and other multi-legged creatures. Most millipedes are slow-moving detritivores, eating decaying leaves and other dead plant matter. Some eat fungi or suck plant fluids, and a small minority are predatory. Millipedes are generally harmless to humans, and can even become household or garden pests. Millipedes can also be unwanted especially in greenhouses where they can cause severe damage to emergent seedlings. Most millipedes defend themselves with a variety of chemicals secreted from pores along the body, although the tiny bristle millipedes are covered with tufts of detachable bristles. Reproduction in most species is carried out by modified male legs called gonopods, which transfer packets of sperm to females. Some of the larger centipedes can inflict a painful bite, causing swelling and redness. Symptoms rarely persist for more than 48 hours. Millipedes do not bite but may secrete a toxin that is irritating, causing burning and itching of the skin and, particularly when accidentally rubbed into the eye, causing redness, swelling, and pain of the conjunctiva or the cornea.

Caterpillars have soft bodies that can grow rapidly between moults. Their size varies between species and instars (moults) from as small as 1 mm up to 14 cm.<sup>[5]</sup> Some larvae of the order Hymenoptera (ants, bees and wasps) can appear like the caterpillars of the Lepidoptera. Such larvae are mainly seen in the sawfly suborder. More aggressive self- defense measures are taken by some caterpillars. These measures include having spiny bristles or long fine hair-like setae with detachable tips that will irritate by lodging in the skin or mucous membranes. However some birds (such as cuckoos) will swallow even the hairiest of caterpillars. Other caterpillars acquire toxins from their host plants that render them unpalatable to most of their predators. For instance, ornate moth caterpillars utilize pyrrolizidine

alkaloids that they obtain from their food plants to deter predators. The most aggressive caterpillar defenses are bristles associated with venom glands. These bristles are called urticating hairs. A venom which is among the most potent defensive chemicals in any animal is produced by the South American silk moth genus Lonomia. Its venom is an anticoagulant powerful enough to cause a human to hemorrhage to death. This chemical is being investigated for potential medical applications. Most urticating hairs range in effect from mild irritation to dermatitis. These toxic species, such as the cinnabar moth (Tyria jacobaeae) and monarch (Danaus plexippus) caterpillars, usually advertise themselves with the danger colors of red, yellow and black, often in bright stripes. Any predator that attempts to eat a caterpillar with an aggressive defense mechanism will learn and avoid future attempts. Some caterpillars regurgitate acidic digestive juices at attacking enemies. Caterpillar hair can be a cause of human health problems. Caterpillar hairs sometimes have venoms in them and species from approximately 12 families of moths or butterflies worldwide can inflict serious human injuries ranging from urticarial dermatitis and atopic asthma to osteochondritis, consumption, coagulopathy, renal failure, and intra-cerebral hemorrhage. Skin rashes are the most common, but there have been fatalities. Lonomia is a frequent cause of envenomation in Brazil, with 354 cases reported between 1989 and 2005. Lethality ranging up to 20% with death caused most often by intracranial haemorrhage. Caterpillar hair has also been known to cause kerato-conjunctivitis. The sharp barbs on the end of caterpillar hairs can get lodged in soft tissues and mucous membranes such as the eyes. Once they enter such tissues, they can be difficult to extract, often exacerbating the problem as they migrate across the membrane.

This becomes a particular problem in an indoor setting. The hairs easily enter buildings through ventilation systems and accumulate in indoor environments because of their small size, which makes it difficult for them to be vented out. This accumulation increases the risk of human contact in indoor environments.

**Skinks** are lizards belonging to the family **Scincidae** and the infraorder **Scincomorpha**. With more than 1,500 described species, the **Scincidae** are one of the most diverse families of lizards. Lizard bites may be frightening, but most of the species do not cause serious health problems. Out of 3000 species of Lizard's worldwide, only two species i.e. *Gila monster* and *Mexican Beaded* lizard are venomous. In India, none of these varieties are found. Old people believe that even the breath or the urine of the Lizard is poisonous. A bite from a lizard leave teeth marks, a minor scrape, or a puncture wound without other symptoms. In India, only reassurance to the relative or the person bitten by lizard is sufficient. Envenomation by poisonous variety occurs by contamination of the wound with venom which is neurotoxic in nature. Changes in level of consciousness, such as unconsciousness, confusion, or extreme sleepiness, severe immediate pain with rapid swelling at the site of the bite, numbness or tingling at or near the bite site. Envenomation result in tissue injury, excruciating pain, massive oedema and patchy erythema.

Systemic symptoms are nausea, vomiting and hematemesis, blurring of vision, dyspnoea, dysphonia and profound weakness. Severe pain following a helodermitid bite may lasts many hours and generalized weakness may persists for several days. Systemic manifestation usually last for 3-4 days

## II. AIM

Enumerate the number of ingredients used in management for Attai (Leech), Maraattai (millipede), Kampalipoochi (Caterpillar), and Aranai (Skink) poisonous bites in ancient siddha medical system.

## III. OBJECTIVE

- To list out the number of plants which are used for management for Attai (Leech), Mara-attai (millipede), Kampalipoochi (Caterpillar), and Aranai (skink) poisonous bites in Siddha Medicine.
- To list out the number of metals & minerals which are used for management Attai (Leech), Mara-attai (millipede), Kampalipoochi (Caterpillar), and Aranai (skink) poisonous bites in Siddha Medicine.
- To list out the number of animal products which are used for management of Attai (Leech), Mara-attai (millipede), Kampalipoochi (Caterpillar), and Aranai (skink) poisonous bites in Siddha Medicine.

## IV. MATERIALS & METHODS

### 4.1 RESEARCH TYPE – Literature Review

**4.2 DATA COLLECTED FROM – “SIDDHA TOXICOLOGY”**, - a translation of Tamil siddha text Nanju Murivu Nool written by Vaidya Sironmani Pandit Dr. K. S. Murugesu Muthalitar, Revised by Dr. Pon Gurusironmani, Translated by P. Jeyaraj and Edited by: Dr. Anaivaari R. Anandan, published by: Department of Indian Medicine & Homeopathy, Chennai 600 106, 1<sup>st</sup> edition- 1999, reprinted Year – 2017.

This book compendium of following this book,

- Theraiyar yemaka venba, Theraiyar gunapadam, Theraiyar karisal 300, Theraiyar thaila varuka surukkam, Theraiyar sekarappa, Agasthiyar vidapirathi vidathirattu,
- Agasthiyar vaithiya kaviyam 1500, Bohar 3000, Karuvor thevar – thandagam,
- Theraiyar karisal, Agasthiyar pathartha guna sindhamani, Agasthiyar 21000,
- Vidasangara aarudam, Nagaarudam, Sarppaarudam, Karudaarudam, Pullipani 500,
- Vagadasanthrothayam, Aayulvasittam, Thiruvalluvar Thirukural.

### 4.3 ANALYSIS

- Data analysis by MS excel.
- Descriptive Simple Statistical way

## V. RESULTS

NO	PLANT	BOTANICAL NAME	PART USED	USES	
1	Nilavembu	<i>Andrographis paniculata</i>	Whole plant	Karkam	Attai
	Poondu	<i>Allium sativum</i>	Bulb	Karkam	
	Milaku	<i>Piper nigrum</i>	Fruits	Karkam	
2	Aadu theendapaalai	<i>Aristolochia bracteata</i>	leaf	Juice	
3	Punal murunkai	<i>Moringa oleifera</i>	Leaf	Karkam	
	Severukkan	<i>Calotrophis gigantea</i>	Root	Karkam	
4	Vempatampattai	<i>Ventilago madraspatana</i>	Bark	Oil	
5	Sukku	<i>Zingiber officinale</i>	Rhizome	Chooranam	Maravattai
	Milaku	<i>Piper nigrum</i>	Fruits	Chooranam	
	Thippili	<i>Piper longum</i>	Fruits	Chooranam	
6	Kattuvagai	<i>Albizia lebbek</i>	Root	Nasiyam	
7	Thanneer vittan kizhangu	<i>Asperagus racemosus</i>	Rhizome	Juice	
8	Kuppai meni	<i>Acalypha indica</i>	Leaf	External application	Kambali poochi
	Manjal	<i>Curcuma longa</i>	Rhizome	External application	
9	Sukku	<i>Zingiber officinale</i>	Rhizome	Chooranam	Aranai
	Vasambu	<i>Acorus calamus</i>	Rhizome	Chooranam	
10	Saranai	<i>Trainthema portulacastrum</i>	Root	Extrenal application	
11	Panai	<i>Borassus flabellifer</i>	Tender leaves	Juice	

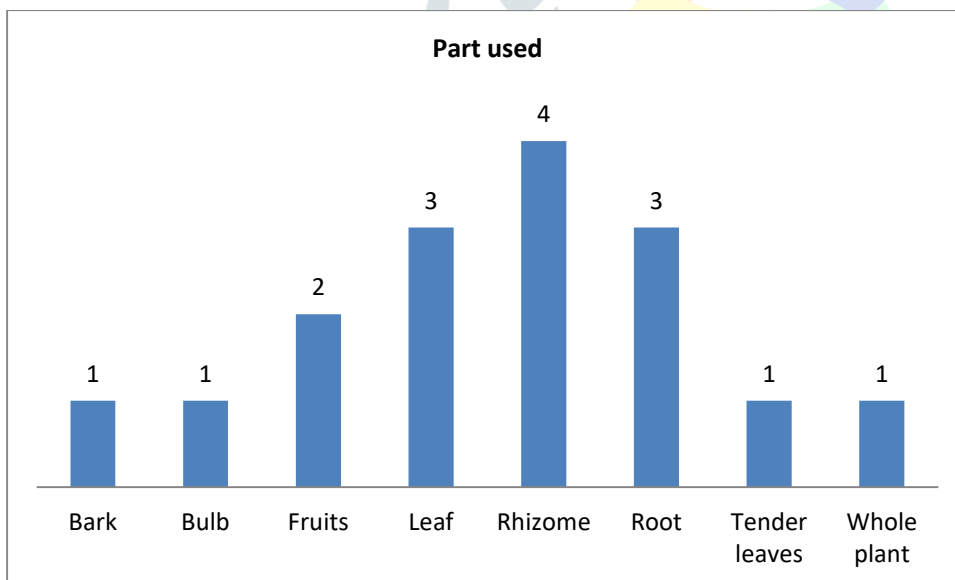


Fig :1 Fig 5.1Part used in medicine preparations

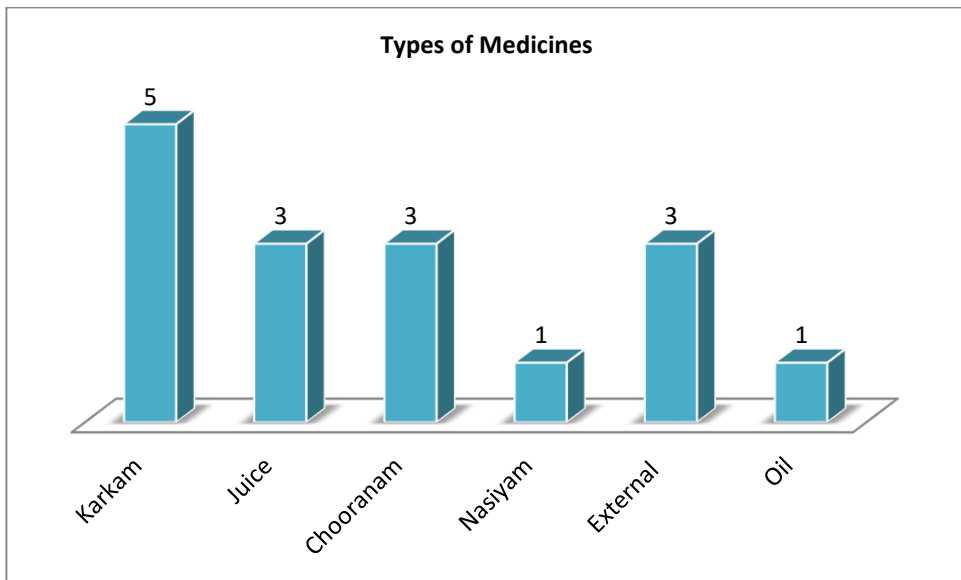


Fig:5.2-Type of medicine

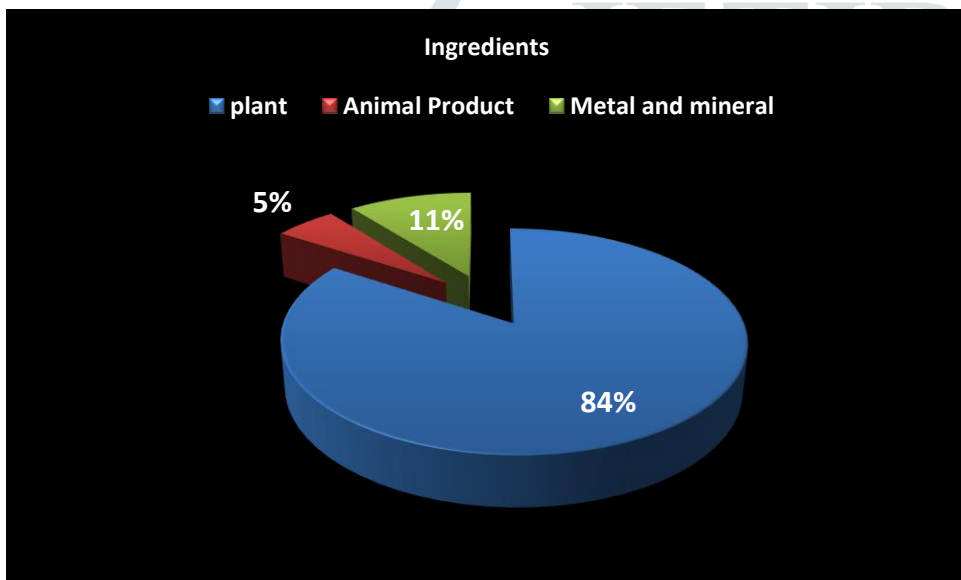


Fig:5.3- Ingredients of the preparations

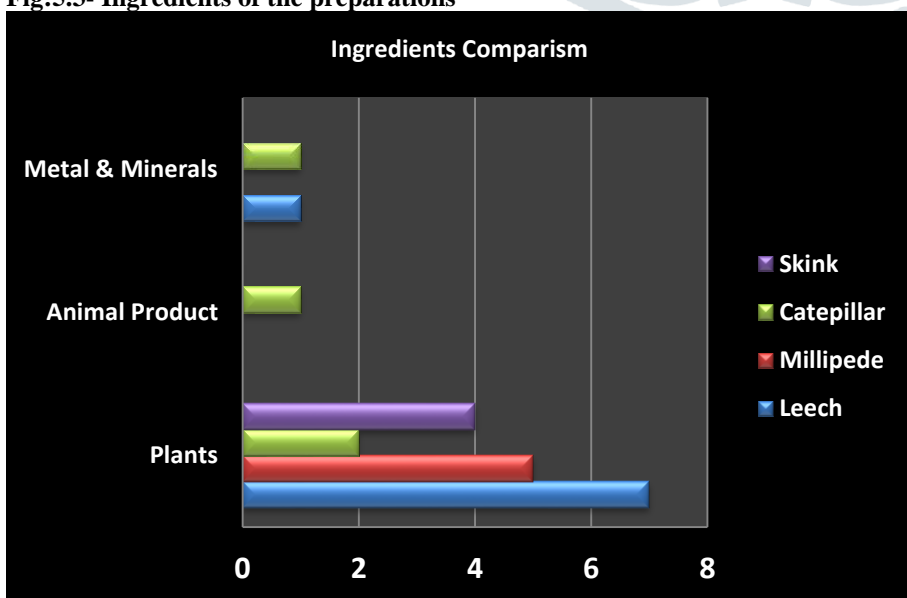


Fig:5.4-Ingredient comparision

## VI. DISCUSSION & CONCLUSION

In this research, data collected from siddha management for poisonous bites by *attai* (Leech), *mara-attai* (Millipede), *kambali poochi* (Caterpillar), *aranai* (Skink) and Fish. They were 16 plants, 02 minerals and only one animal product listed in siddha treatment process. In results; *Piper nigrum* (*milaku*) and dry *Zingiber officinalis* (*chukka*) were used most common in 02 prepared medicines and other 14 plant raw materials were list only one remedy. In taxonomical aspect; 08 different taxonomies found and Rhizomes-04, Leaves and Roots-03, Fruits -02 and others are only one ingredients used for treatments. Mica (*abrakam*) and salt used in mineral and urine as animal product of management by prepared medicines such as Karkam, Juice, Chooranam, Oil, Nasiyam and External Application to above poisonous bites. Therefore, this research concluded as to need a clinical assessment of siddha management in modern scientific way and introducing to global level in future.

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5. <sup>^</sup> Jump up to: <sup>a</sup> <sup>b</sup> Justin L. Rheubert; Dustin S. Siegel; Stanley E. Trauth (19 December 2014). *Reproductive Biology and Phylogeny of Lizards and Tuatara*. CRC Press. pp. 548–. ISBN 978-1-4665-7987-3.
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APPENDICES

Sukku( *Zinger officinale*)



MILAKU ( *Piper Nigrum*)



ABRAGAM(Mica)



COMMON SALT (Sodium chloride)



URINE



LEECH



MILLIPEDE



CATEPILLAR





