



Management of Scorpion bite in Siddha system

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Abstract

Siddha system is most effective ancient Indian medicine. Siddha medicine deals with removing the toxin from the body. Scorpion venom is a water-soluble, antigenic, heterogenous mixture. Scorpion venom may contain multiple toxins and other compounds. Though local symptoms including severe pain and burning sensation at the site of sting are the most common manifestations, systemic complications can ensure. In this research, data collected from management of scorpion bite in siddha system. They were 20 plants are listed in siddha management process, in results ; prepared medicines are 13 externally and 7 internally used. In taxonomical aspect; 08 different taxonomies found Leaf- 05, Rhizome and Root- 04, Seed and Whole plant- 02 and others are only one ingredients used for treatment. The prepared medicine such as Chooranam, Karkam, Juice, Poochu, Patru and Oil to uses the management of scorpion bite. 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 system, Scorpion bite, siddha management, prepared medicines.

Introduction

There are about 1500 species of scorpions worldwide, out of these 50 are dangerous to human. Among 86 species in India, *Mesobuthus tamulus* (Indian red scorpion) and *Heterometrus swammerdami* are of medical importance. A scorpion has a flattened elongated body and can easily hide in cracks. It has 4 pairs of legs, a pair of claws, and a segmented tail that has a venomous spike at the end. Scorpions vary in size from 1-20 cm in length. Almost all of these lethal scorpions, except the Hemiscorpius species, belong to the scorpion family called the Buthidae. The Buthidae family is characterized by a triangular-shaped sternum, as opposed to the pentagonal-shaped sternum found in the other 5 scorpion families.

Scorpions use their pincers to grasp their prey; then, they arch their tail over their body to drive their stinger into the prey to inject their venom, sometimes more than once. The scorpion can voluntarily regulate how much venom to inject with each sting. The striated muscles in the stinger allow regulation of the amount of venom ejected, which is usually 0.1-0.6 mg. If the entire supply of venom is used, several days must elapse before the supply is replenished.

The venom glands are located on the tail lateral to the tip of the stinger and are composed of 2 types of tall columnar cells. One type produces the toxins, while the other produces mucus. The potency of the venom varies with the species, with some producing only a mild flu and others producing death within an hour. Venom deposited via the intravenous route can cause

symptoms only 4-7 minutes after the injection, with a peak tissue concentration in 30 minutes and an overall toxin elimination half-life of 4.2-13.4 hours through the urine. The more rapidly the venom enters the bloodstream, the higher the venom concentration in the blood and the more rapid the onset of systemic symptoms.

In addition to the triangular-shaped sternum, venomous scorpions also tend to have weak-looking pincers, thin bodies, and thick tails, as opposed to the strong heavy pincers, thick bodies, and thin tails seen in nonlethal scorpions. The lethal members of the Buthidae family include the genera of Buthus, Parabuthus, Mesobuthus, Tityus, Leiurus, Androctonus, and Centruroides. Scorpion venom is a water-soluble, antigenic, heterogenous mixture. Scorpion venom may contain multiple toxins and other compounds. The venom is composed of varying concentrations of neurotoxin, cardiotoxin, nephrotoxin, hemolytic toxin, phosphodiesterases, phospholipases, hyaluronidases, glycosaminoglycans, histamine, serotonin, tryptophan, and cytokine releasers. The most important clinical effects of envenomation are neuromuscular, neuroautonomic, or local tissue effects. Though local symptoms including severe pain and burning sensation at the site of sting are the most common manifestations, systemic complications can ensue. Cardiovascular manifestations are particularly prominent following stings by Indian red scorpion. Such bites infrequently have serious clinical sequelae, including myocardial infarction, acute pulmonary edema, cardiogenic shock, and even death. We present herein a case report with the clinical manifestations following scorpion bite mimicking acute myocardial infarction associated with acute pulmonary edema and congestive heart failure.

Clinical features:

Signs and symptoms at the site of a scorpion sting may include:

- Pain, which can be intense
- Numbness and tingling
- Slight swelling
- Warmth

Signs and symptoms related to widespread (systemic) venom effects usually occur in children who are stung and may include:

- Difficulty breathing
- Muscle twitching or thrashing
- Unusual head, neck and eye movements
- Drooling
- Sweating
- Nausea and vomiting
- High blood pressure (hypertension)
- Accelerated heart rate (tachycardia)
- Restlessness or excitability, or inconsolable crying in children.

Aim

To enumerate the number of plants used in management of scorpion bite in siddha medical system.

Objective

To list out the number of plants which are used to management of scorpion bite in siddha medical system.

To take awareness on the scorpion bite.

Materials and Methods

Research type – Literature Review

Data collected from – “Siddha materiamedica”, - a translation of Tamil siddha text gunapadam mooligai written by Vaidya Rathnam K. S. Murugesu Muthalitar, Edited by: Dr. Anaivaari R. Anandan, published by: Department of Indian Medicine & Homeopathy, Chennai 600 106, 1st edition - 1936, reprinted Year – 2013.

Analysis

Data analysis by MS excel.
Descriptive simple Statistical way.

Results

Plant name	Botanical name	Family	Taxonomy	Part used	Formulation of medicine	Medicine
Kummatti	<i>Citrullous colocynthis</i>	Cucurbitaceae	Climber	Seed	Oil	Intrenal
Etti	<i>Strychnos nux- vomica</i>	Loganiaceae	Tree	Bark	Chooranam	Intrenal
Erukku	<i>Calotropis gigantea</i>	Apoyaneceae	Shrub	Leaf	Charu	Intrenal
Karisalankanni	<i>Eclipta prostrata</i>	Asteraceae	Herb	Leaf	Karkam	External
Karumbu	<i>Saccharum officinarum</i>	Poaceae	Herb	Rhizome	Poochu	External
Kalappaik kianku	<i>Gloriosa superpa</i>	Colchicaceae	Herb	Rhizome	Chooranam	Intrenal
Kalli	<i>Euphorbia ligularia</i>	Euphorbiaceae	Shrub	Milk	Poochu	External
Mullikkerai	<i>Amaranthus spinosus</i>	Amaranthaceae	Herb	Whole plant	Charu	Intrenal
Kudiottipoondu	<i>Argemone Mexicana</i>	Papavaraceae	Herb	Root	Karkam	External
Kundrimani	<i>Abrus precatorius</i>	Fabaceae	Shrub	Root	Chooranam	Intrenal
Kundhalpanai	<i>Caryota urens</i>	Arecaceae	Tree	Seed	Poochu	External
Korai	<i>Cyperus rotundus</i>	Cyperaceae	Herb	Rhizome	Patru	External
Sembai	<i>Sesbania sesban</i>	Febaceae	Tree	Root	Patru	External
Thelkodukku	<i>Heliotropium indicum</i>	Boraginaceae	Herb	Leaf	Poochu	External
Nabi	<i>Aconitum napellus</i>	Ranuanculaceae	Herb	Whole plant	Chooranam	Intrenal
Parutthi	<i>Gossipium herbaceum</i>	Malvaceae	Shrub	Leaf	Patru	External
Perunkayam	<i>Ferula asafoetida</i>	Apiaceae	Herb	Resin	Poochu	External
Manipunku	<i>Sapindus laurifolia</i>	Sapindaceae	Shrub	Root	Poochu	External
Charukkarai valli	<i>Ipomoea batatas</i>	Convolvulaceae	Climber	Leaf	Poochu	External
Venkayam	<i>Allium cepa</i>	Alliaceae	Herb	Rhizome	Poochu	External

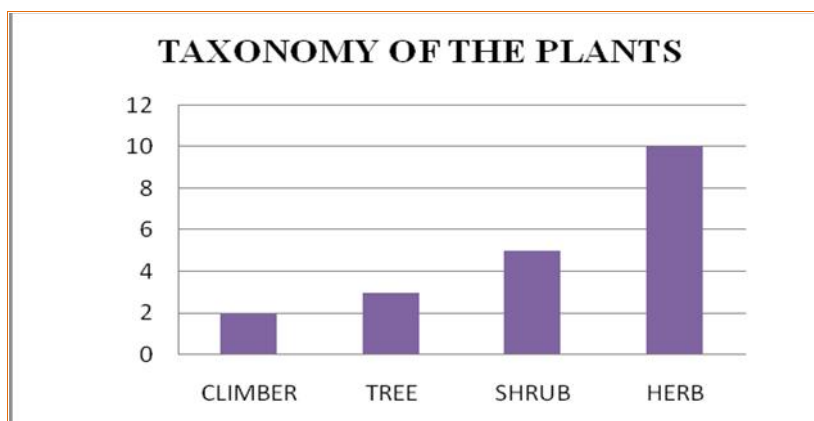


Fig.no; 1 – Taxonomy of the plants

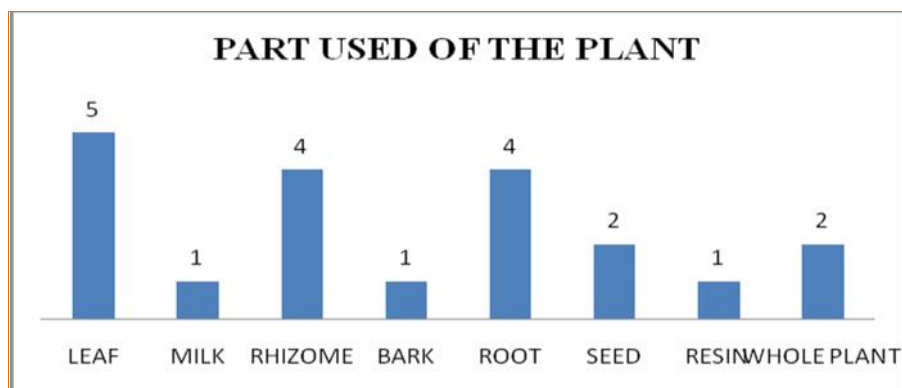


Fig.no; 2 – Part used of the plants

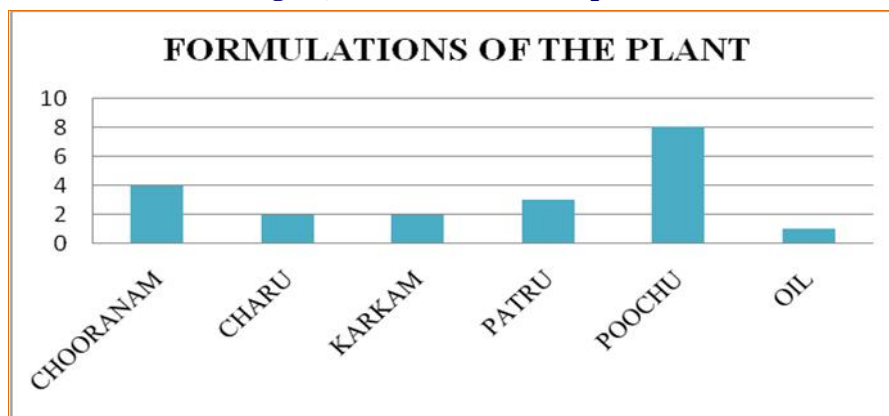


Fig.no : 3- Formulations of the plan.

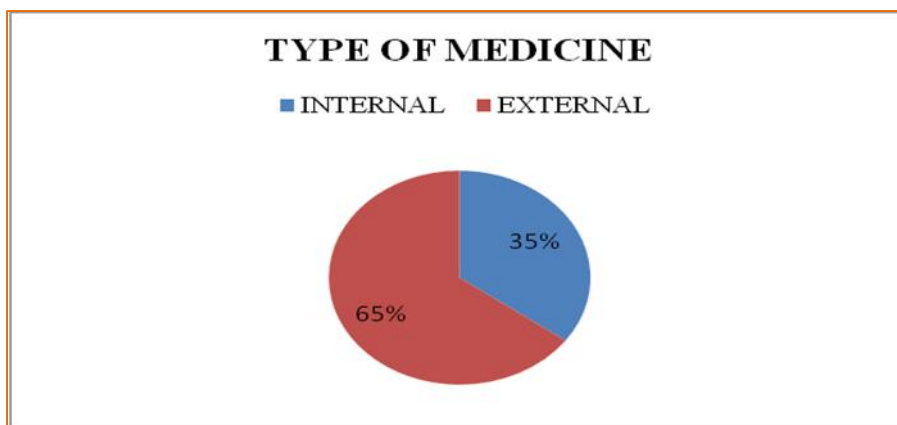


Fig. no: 4- Type of medicine

Discussion and Conclusion

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Appendix:



Heliotropium indicum



Calotropis gigantea

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