

Antidotes for thelkadi (Scorpion sting) according to the siddha system of medicine – Review

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INTRODUCTION

The highly systematized siddha systems of medicines are based on nature and its elements. This system of medicine also describes some specific antidotes for various poisons ingested as well as for stings of several toxic creatures and insect bites especially for scorpion sting. Scorpion stings are a major public health problem in many tropical countries. The estimated annual global incidence, based on national health data is about 1.5 million envenoming involving 2600 death. Although most scorpion sting cause only localized pain without life threatening envenoming, about one third of sting cause systemic envenoming which can result in death. Although the incidence of scorpion sting is higher in adults, the severity of envenoming is significantly greater in children, in whom the fatality rate is upto 10 times higher than in adults. Victims of envenoming by a scorpion suffer a variety of pathologies involving mainly both sympathetic and parasympathetic and central manifestations. The antidotes for scorpion sting described in Siddha Literatures are simple and effective. The authors aim to reveal such antidotes for Thelkadi, mentioned in Siddha Literatures.

INCIDENCE

Scorpions belong to class Arachnida. There are more than 1250 species of scorpions. About 100 species are found in India. The commonest are mesobuthustamulus (Red scorpion)

and palamneusswammerdami (Black scorpion). The former is more venomous. Fatality is rare as dose in sting is not lethal.

In Asia epidemiological data on scorpion stings is scarce. India is the most affected with a reported incidence of 0.6%. A retrospective analysis of the calls received by the national poison information centre (NPIC) between April 1999 and March 2002 showed that out of 995 calls 6 involved scorpion sting. During hot months March to June and September to October daily cases of severe scorpion sting are received at endemic areas western Maharashtra, Karnataka, Andhrapradesh, Saurashtra and Tamil Nadu. 11-15 severe scorpion sting due to *Mesobuthus* *Tamulus* species of scorpion per month reported from kokan region. Higher incidence of Scorpion sting occurred during hot months attributed to increase in agriculture activities.

Prevalence:

Previous studies indicate a high prevalence of scorpion envenomation as well as related mortality in developing countries compared to developed nations, reflecting a lack of adequate health care facilities, low socio economic backgrounds and inadequate authentic information about this affliction in poor regions. In a related review study by cippaux and Goyffon, Seven areas were identified as more at risk, including saharan Africa (North), Sahelian Africa, South Africa, the Near, and Middle East, southern India, Mexico and Southern Latin America and the region east of the Andes, Where the total at risk population is 2 – 3 billion. In middle Eastern countries there are almost 52 toxic scorpion species, most of which are found in Iran, due to its favourable geographic and climatic indicators. More than 42, 500 cases of scorpion stings per year in Iran have been reported, of which , despite appropriate treatments

TYPES OF THEL (SCORPION)

These are twelve varieties of scorpions of which the following ten are common.

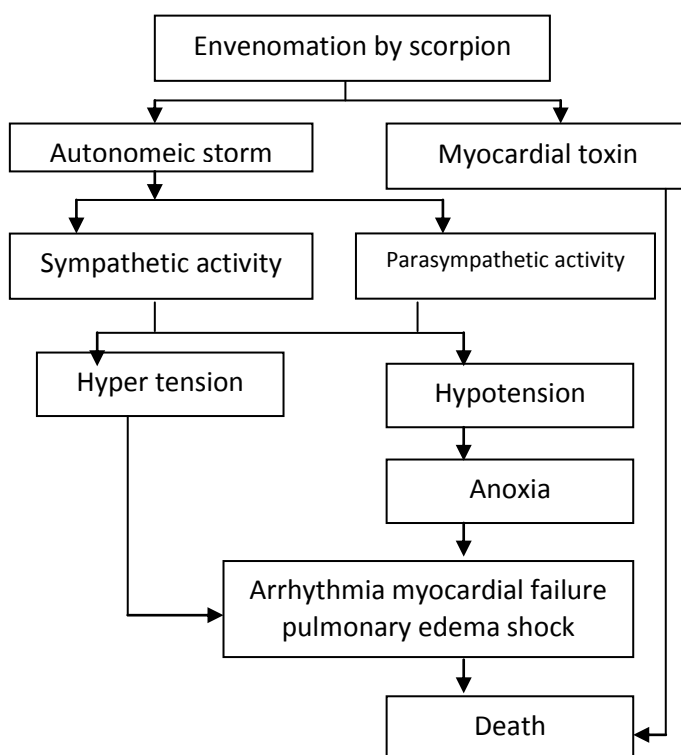
1. ***VenThel*** (White scorpion)
2. ***Chen Thel*** (Red scorpion)
3. ***Karunthel***(Black scorpion)
4. ***ChithiraThel*** (Multicoloured scorpion)
5. ***Kollitheal***
6. ***Sannitheal***
7. ***Siruthel***(Small scorpion)
8. ***Perunthel***(Big scorpion)
9. ***Sinai thel***
10. ***Nattuvakali*** (Crab clawed scorpion)

VENOM

Scorpion venom is clear, colourless fluid and contains following toxic compounds

- Neurotoxin
- Haemotoxin
- Phospholipase
- Hyaluronidase
- Serotonin
- Its toxicity is more than that of snakes, but only a small quantity is injected.

MECHANISM OF ACTION:



SIGNS AND SYMPTOMS

➤ Local

- Increasing local pain. The pain is typically described as burning and excruciating
- Swelling
- Redness
- Itching
- Ecchymoses

➤ Systemic

- Sweating

- Urticaria
- Salivation
- Vomitting
- Breathlessness and cough
- Hemoptysis
- Priapism
- Hypertension
- Bradyarrhythmias
- Pulmonary oedema
- Myocarditis
- Myocardial ischemia
- Restlessness
- Giddiness
- Convulsions

Intracerebralhemorrhage leading to paralysis.

COMPLICATION:

The very old and the very young are most likely to die of untreated venomous scorpion sting. The causes is usually heart (or) respiratory failureoccurring some hour after the sting. Another possible complication of scorpion stings, though rare, is severe allergic reactions (Anaphylaxis)

- Cellulitis &abscess formation at sting site
- Dilated cardiomyopathy
- Ankylosis of small joints if the sting occurs at a joint
- Persistent paresthesia
- Respiratory arrest
- Cardiac arrest
- Shock
- Seizures
- Rhabdomyolysis
- Renal failure
- Pancreatitis
- Antirenin anaphylaxis
- Death

GENERAL MANAGEMENT:

- Immobilized affected limb
- Oxygen administration
- Local ice application
- Clean the wound with mild soap and water
- Do not cut into the wound (or) apply suction
- If a child is 5 years (or) younger is stung – seek, evaluation by the medical caregiver.

• REVIEW OF LITERATURE

S.No	Text Book (or) Reference	Form of Medicine (or) Formulation	Ingredients	Dosage (or) Method of Application	Indication
1.	Vishavaithiyasindhamani	Fine Powder	Chukku (Zingiberofficinale) Milagu (Piper nigrum) Vendhayam (Trigonellafoenum) etc.,	1 Panavadai (488mgm)	Scorpion, Natuvakali & Sayaan sting
2.	NanjuMurivunool	Paste Form	GollanGovai (Corollo carpus epigaeus) etc.,	External	Black Scorpion sting
3.	Therayarvaithiyakaaviyam – 1500	Paste form	Peria-Nankai (Polygala elongata) etc.,	Fumigation	Scorpion sting
4.	VishaVaithiyaAarudaNool	Paste Form	Erukku Leaf (Calotropisgigantea) etc.,	Sundaialavu (0.798gm)	Scorpion sting
5.	Vishamurivupoochukadivaithiyam	Fine powder	Thumbai Leaf (Leucasaspera) Manjal (Curcuma longa) etc.,	Internal	Scorpion sting
6.	SarabendraVaithiyaMuraigal	Anointing	Vetrillai Leaf (Piper betel) etc.,	External	Scorpion sting
7.	Agasthiyarmani 4000 ennumvaithiyasindhamanivenba 4000- part – II	Paste form	Kuppaimeni leaf (Acalyphaindica) Gingelly oil Mango seed (Mangiferaindica) etc.,	External	Scorpion sting
8.	ThanjaiVaithiya Raja Sindhamani Part – II	This oil is used for all scorpion sting	Iluppai leaf (Madhucalongi folia) Uppu (Sodium chloride) Vembu Oil (Azadirachtaindica)	1 Panavedai (488 mgm)	Scorpion and Natuvakali sting
9.	Anubogavaithiyamperukural	paste form	Navasaram (Ammonia chloridum) Sunnambu (Limestone) etc.,	External	Scorpion sting
10.	Sarabedrarvaithiyamuraigal	Paste form	manjal (Curcuma longa) etc.,	fumigation	Scorpion sting
11.	Patharthagunasindhamani	Fine powder	Kuntri root (Abrusprecatorius)	Internal	Scorpion & Snake poison

			&Goat's urine etc.,		
12.	SarabedirarVaithiyaMuraigal	Paste form	Pagal leaf (Momordicacharantia) etc.,	External	Scorpion sting
13.	PulipaniMarunthugal	Paste form	PeriyaNankai (polygala elongata) water etc.,	External	Scorpion sting
14.	Yugimunivaithiyakaaviyam	Paste form	Camphor & water etc.,	External	Scorpion sting
15.	Siddha MaruthuvaKalanchiyam	Paste form	Thumbai leaf (Leucasaspara Thelkodukku leaf (Heliotropiumindicum) etc.,	External	Scorpion sting
16.	Parambarai siddha mooligaimarunthukal	Fine powder	Erukku Leaf (Calotropisgigantea) Thulasi (Ocimum sanctum) etc.,	Internal	Scorpion sting
17.	KosayiAnubogavaithiya brahma ragasiyam - Part – II	Decoction	Milagu (Piper nigrum), Manjal (Curcuma longa), Kundrimani (Abruspreparatorius)	Internal	Scorpion sting
18.	Anubogavaithiyam	Paste Form	Erukku Leaf (Calotropisgigantea Vellaipundu (Allium sativum) etc.,	External	Scorpion sting
19.	Vaithiyathirattu	Nasal drop	Kalan (Agaricuscampestris) and Hot water	External	Scorpion sting
20.	Dhanvantrikalaignanam 500	paste form	Puli leaf (Tamarindusindica) etc.,	External	Scorpion and Wasp's sting
21.	KosayiAnubogavaithiya brahma ragasiyam - part – I	Fermentation	Uppu (Sodium chloride) Ellu Oil (Sesamumindicum) and Water etc.,	External	Scorpion sting
22.	Parambariya Siddha vishamaruthuvaSeigichaimuraigal	Ear drop	Kuppaimeni Leaf (Acalypaindica) and Uppu (Sodium Chloride) etc.,	External	Scorpion sting
23.	AnubogaVaithiyam	Ear drop	Uppu (Sodium Chloride) and Water etc.,	External	Scorpion sting
24.	Vishamurivupoochukadivaithiyam	Fine powder	Erukku Leaf (Calotropisgigantea) Milagu (Piper nigrum) etc.,	30ml (Internal)	Scorpion sting
25.	VishavaithiyaSinthamani	Thailam	Thantri seed (Terminaliabellerica) Kadukkai (Terminaliachebula) etc.,	1 Panavedai (488 mgm)	Scorpion, Pudaiyan, Natuvakali, and Sundeli sting.
26.	NanjuMurivuNool	Pills form	Camphor & Caesalpiniaacristataetc	External	Scorpion sting
27.	VishavaithiyaAarudaNool	Paste form	Kadambu seed	External	Scorpion Sting

SUMMARY

The antidotes above cited are described in siddha system of medicines. In this world the rare human birth will be enjoyable only if it is free from diseases, and also from stings of several toxic creatures and insect bites.

The methods of preparation of the antidotes for such insect bites mentioned in above siddha literature are not difficult. “SarabendrarVaidhiyaMuraigal” describes antidote for scorpion bite and it is a sample of effective antidote. “VishavaithiyaAarudaNoolgal” describes another effective & essential antidote.

CONCLUSION

Even today treating the poisonous cases and insect bites is a challenge to the modern medical profession. But treating such poisonous cases through the siddha system of medicines seems to be more faithful and economical. If the siddha literatures about antidotes are usefully explored, many antidotes for insect bites especially for scorpion bites can be brought out.

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