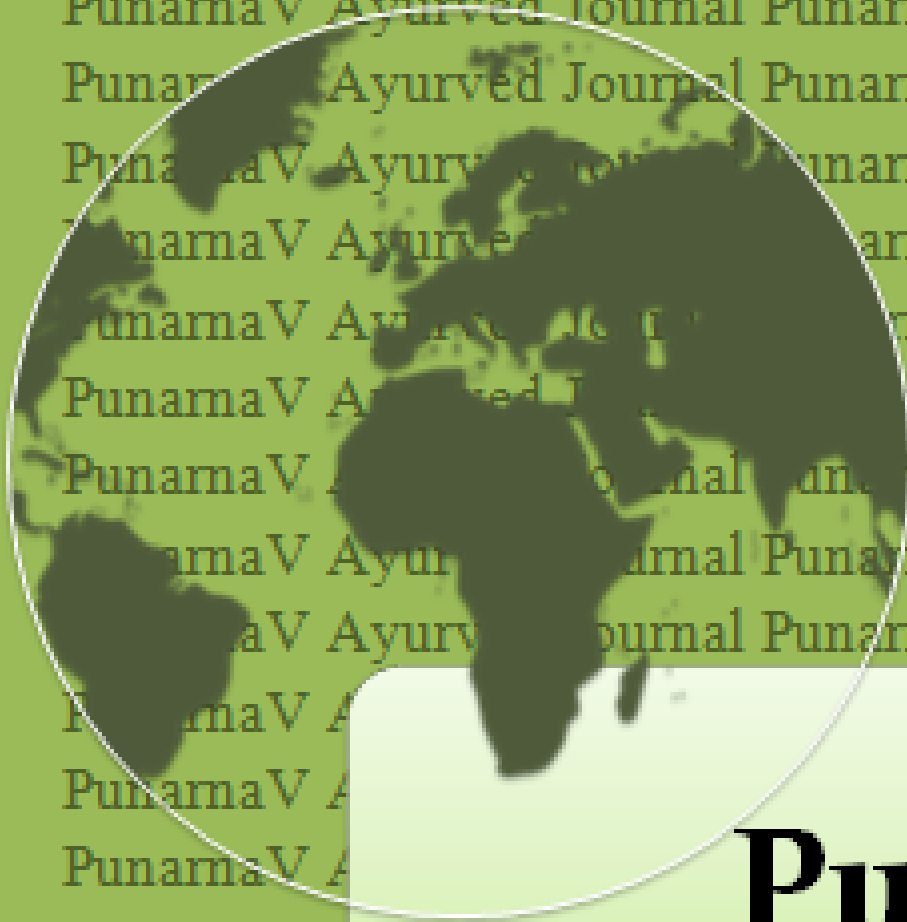


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**A REVIEW ON SCORPION POISONING (VRISHCHIKAVISHA)
AND MANGEMENT IN AYURVEDA**

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ABSTRACT:

Vrścika(scorpion) is said to be one of the oldest poisonous creatures of earth. This eight legged creature causes more than five thousand deaths worldwide per year. In among 800-1000 species, 30 species are lethal to humans. Red scorpion is said to be most lethal species among which found in India. Casualty of life is very less, but it can cause local pain, inflammation, edema and redness of skin. Ayurvedic classics explains various varieties of Vrścika(scorpion) based on its origin, structure and its sting effect. Manda Vrścika(mildly poisonous)is predominantly black in colour and produces similar symptoms of genus Heterometrus scorpion, a common variety along the Kerala- Karnataka coastal area. Many Ayurvedic physicians are successfully managing scorpion poisoning cases and their complications with absolute Ayurvedic medications. Here an attempt is done to review the Vrścikavisha (scorpion) poisoning and its management in Ayurvedic classics.

KEYWORDS: *Pratisaranam, Kita visha, Sechana, Scorpion sting, Vrishchikavisha*

INTRODUCTION

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In the science of *Ayurveda* the *vrścika* (scorpion) is categorized under *kita visa* (insect poison). This kind of Scorpion stings are seen often in rainy season in rural area where vegetation, often forested, humid regions with subtropical to tropical climate. By the result of sting, people will rush to health aid, where treatment is given for pain, whereas swelling will remain for weeks and may lead to allergic reactions also. To overcome all these associated ailments it is necessary to adopt accurate conservative method. In this paper, the author tries to highlight the descriptions of different varieties of scorpion along with their poisoning symptoms and adoptable conservative methods as mentioned in *Ayurvedic* classics.

Origin: *Kitas* (insects) are born from the decomposed mass of excreta, urine, semen, egg or carcass of snakes. They are of four kinds, each one possessing the qualities of individual *doshas*(humors) separately and one with the qualities of all the *doshas*(humors) together¹. According to

Madhavanidana, the origin of *vrścika* was out of the droplets of the sweat of the sage *Vasishtha* when he became angry on *Vishwamitra* at the abduction of *Kamadhenu*, the cow. These sweats fell on the grass and converted into *lutas* (spider) which developed *asvrścika*.

The *vrścika* mentioned in the classics can be correlated to the scorpion. Scorpions are arthropods which have crab like appearance with long, fleshy, segmented tail-like post abdomens, with eight legs, two pedipalps, and a tail with a venom-injecting barb. It is ending in a broad sac and a prominent hollow sting which communicates by means of a duct with the venom secreting glands. Scorpions have two venom glands that produce venom used in hunting and self-defense. The venom contains toxalbumins having neurotoxic and heamotoxic actions. Its toxicity is greater than that of snakes. Scorpions do not have bones instead they have an exoskeleton made of chitin, which is similar to the shell of a shrimp.

CHARACTERISTICS

Scorpions are like spiders, they are arachnids and all arachnids share a well-known body characteristic; eight legs. In addition, arachnids lack wings and antennae, which can also help identify them. These legs are thicker though and spread apart more than those of spider species. They look brittle but that is

typically due to the fact that they are usually in various stages of molting. When they molt they are shedding their exoskeleton. They have claw like protrusions from the mouth by which they are most recognizable and is an obvious characteristic that they use to suck the liquid out of their prey. The body isn't designed for them to consume anything in a solid form. The enzymes in the venom turn the prey into a liquid form on the inside. The abdomen is usually high of the ground with most species. However, there are many of them that carry it very low to the ground. This can help them to blend into the soil and the sand with ease. They are very fast moving which is also why it can be hard to capture them. The tail is

very wide and it also in five segments. They can have complete flexibility of movement with it. It is having a stinger at the end of the tail, that is used to inject venom. The males are larger than the females. They may be tan, brown, or even a fluorescent form of green. It depends on where they are located and their surroundings. Even though there are differences based on species there are many basic similarities among them. They don't have good vision but they do have lots of eyes. All species have at least 6 eyes. However, many of them have as many as 12.

DISCUSSION

According to *Acharya Sushruta*, the morphology² is as follows:

There are three types of *vrścikas* (scorpion) according to the poison they contain:

- *mandavisha* (mild poison)
- *madyamavisha* (moderate poison)
- *tikshnavisha* (virulent poison)

The *vrścikas* (scorpion) which are originated from:

- putrefied cow dung have mild poison
- wood and bricks have moderate poison
- sloughed snakes or from other poisonous substances are virulent.

These *mandavisha* (mild poison) scorpions possess many joints in comparison to the other types. The scorpion which are having

madyamavisha (moderate poison) are red yellow and brown with smoky abdomen with three joints. The scorpion which are having *tikshnavisha* (virulent poison) have two joints in their tail, have different shapes, different sizes and colours. They are terrifying and these kinds of scorpions are to be known as *pranacaurah* (thieves of life or killers).

Varieties: Further classification² of the three types of *vrścika* (scorpion) are as follows:

- Mild poison are twelve in number.
- Moderate poison are three in number.
- Virulent poison are fifteen in number.

Total there are 30 types of *vrścika* (*scorpions*)

Toxins

General features³ of *vrścikavisha* according to *Acharya Vagbhata*

The features of *vishain vrścika* are:

- *Tiskhnan* (highly potent) in nature
- *Ushna* (hot potency), so it causes *daha* (burning sensation like fire)
- In the beginning there will be *daha* on the *damshasthana* (bite site) and there after it spreads upwards (general spread)
- At the end, it localizes at the site of the sting. It produces severe pain, blackish discoloration and throbbing type of pain at the site of the sting.

CLINICAL FEATURES / EFFECTS⁴

If someone is stung by the scorpions having *mandavisha* (mild poison), the following symptoms are observed:

- *vedana* – Pain
- *vepathu* – trembling
- *gatrastambhah* - Stiffness in the body
- *krushnaraktagamash* - Outflow of black blood.

If stung in the extremities

- *vedana* - Pain upwards along with burning sensation
- *daha* - burning sensation
- *sveda* - Sweating
- *damshashopham* - Local inflammation
- *jvara* - Fever.

Specific Poisoning features⁵ according to *Acharya Sushruta* for moderate poison.

If someone is stung by the scorpions having *madhyamavisha* (moderate poison) the following symptoms are observed:

- *jihvashopha* - swelling of the tongue
- *bhojanasyavarodha* - difficulty in deglutition
- *murcha* – deep fainting

Specific Poisoning features⁶ according to *Acharya Sushruta* for virulent poison

If someone is stung by the scorpions having *tiskhnavisha* (virulent poison) the following symptoms are observed:

- *sarpavega* – poisonous impulses similar to snake poison
- *pravrutti* – rise of pustular eruptions
- *braanti* – psychical disturbances
- *daaha* - burning sensation
- *jvara* – fever
- *krushnashonita* - discharge of blackish discolored blood
- *praanastyajyate* - person dies soon

General poisoning features⁷ of *vrścika* according to *Acharya Vagbhata*

If someone is stung by the scorpions having highly poisonous scorpions the following things are observed:

- *tairdashtahshoonarasanah* - Oedema of tongue
- *stabdhagaatrorujaarditah* - Rigidity of the body parts
- *krushnamindriyaarthaanasamvidan* - Loss of sensory perceptions

- *svidyan*-Perspiration
- *murcha* - Fainting
- *vishushkaasyo* - Dryness of mouth
- patient becomes anxious
- *vedanaaturah* - Severe discomfort due to agonizing pain
- *vishiryamaanamaasashcha* - Sloughing off muscles at the site of sting
- *praayashovijahaatyasoon* - Generally the person dies

Acharya Vagbhata also describes about another type of *vrścika* which he named as *uccitinga*⁸.

This type of scorpion stings by its mouth which produces:

- severe pain,
- stiffness of the penis,
- horripilations
- a feeling as though the body is sprinkled with cold water,
- because of having the colour like the camel this type of scorpion itself is spoken as *Ushtravarnatayaa* and

Raatrikasince it moves in the night times

General poisoning features⁹ of *vrścika* according to *Acharya Charaka*

Sting of a *vrścika* (scorpion) causes:

- *dahtyaagnirivadou* - burning sensation like fire in the beginning
- *bhinattivordhvamashu-* and thereafter pinching pain which spreads upwards instantaneously
- *pashcattutishthati* - At the end the burning sensation and pain localized at the site of the sting

If stung by a scorpion of *asadhya* (incurable) type:

- *drugghranarasanopahato*: The patient loses his power of vision, smell and taste.
- *mamsaihpatadbhiratyartham-* The muscle tissue gets sloughed and falls out
- *vedanarto* - He/she suffers from excessive pain
- *jahatyasun* - Succumbs to death

MANAGEMENT ACCORDING TO THE CLASSICS

Treatment¹⁰ according to the type of *vrścika* sting according to *Acharya Sushruta*:

A sting by a scorpion of the *madhamavisha* (moderate poison) and *tikshnavisha* (virulent poison) should be treated as a case of snake bite. And around

the site of the bite *svedana* (fomentation) should be done.

It should be done followed by:

- *pratisaaranam* (rubbing)

After the *svedana* (fomentation), at the site of the bite should be marked with superficial incisions (scratches) and should be gently rubbed (*pratisaaranam*) with

powders of *haridra*(*curcuma longa*),*saindhava*(rock salt), *trikatu*(three pungents)and the fruit of and flower of *sirisha*(*Albizialebeck*).

- *Lepa*(paste for local application)

The tender leaves of *surasa*(Holy basil) pasted with the juice of *matulunga*(*citrus medica*) and the urine of cow in a lukewarm state or lukewarm cowdung should be employed in plastering and fomenting the affected part.

- *Paana*(drinking recipes)

Portions of *ghruta* mixed with honey, milk with profuse quantity of sugar can be taken internally

Mild poison

In case of bite of *mandavisha* (mild poison) one can do the following:

- ***Sechana*(washed)**

The site of the stung should be bathed with either *chakra taila* (oil fesh from the oil mill) or water boiled with drugs of *vidaryadi*group.

- ***svedana*(fomented)**

The affected part should be repeatedly fomented with the application of poultices (*utkarika*) prepared with anti –venomous drug

- ***paana*(drinking recipes)**

Treacle prepared with cold water, *caturjata*group of drugs and sugar or cold milk mixed with sugar should be recommended as drinks

- ***dhupana* (fumigation)**

The compound made of the feathers of tail of the cock or peacock,*saindhava*(rock salt), oil, ghee mixed together and burnt is a speedy destroyer of scorpion poison.

Formulations

According to *Yogaratanakara*

- *jirakalepa*

In the paste of *jiraka*(cumin seeds),mixing with ghee,*saindhava*and *madhu*(honey) and this prepared paste should be applied on the site of the bite in lukewarm state.

- ***Ajakshiradiyogam***

Fruit of the *sirisha*(*Albizialebeck*) and *pippali*(*piper longum*) should be taken equally and mixed in goat milk and this paste should be applied at the site of the bite.

- ***Karpasapatradiyogam***

Leaves of *karpasa*(*Gossypiumherbaceum*) should be pasted with ghee and this paste should be applied at the site of bite or even *vatsanabha*(*Aconitum ferox*) *vishaca* can be used by mixing with water and the paste should be applied.

- ***Manahshilaadigutika***

Purified *manahshila*(Realgar), seeds of *karanja*(*Pongamiapinnata*), seeds of *sirisha*(*Albizialebeck*), seeds of *gambari*(*Gmelinaarborea*), all should be taken in equal quantity and prepared as *vati*. This can be used as an internal medicine and externally as an application at the site of bite.

- **Jaipalaprayoga**

Seeds of *jaipala*(*Croton tiglium*) should be taken and paste should be prepared along with water and that paste should be applied.

- **Punarnavayoga**

Karpasa(*Gossypiumherbaceum*) root which is collected in Sunday and *svetapunarnavamula*(root of *Boerhaaviadiffusa*) should be chewed and it eradicates the poison.

According to *Bhaishajyaratnavali*, heat small quantity of cow's ghee and add *saindhava*(Rock salt)to it. Apply this

preparation on the spot of stung by the scorpion. Take roots of *tulasi*(Holy basil) and prepare small pills by pounding it. Apply repeated coatings on the spot stung the scorpion. It cures the poisoning of scorpion sting. Slightly heat white cumin and *saindhava*(rock salt) and apply their combination on the spot of stung by the scorpion. This measure would immediately provide relief from pain.

CONCLUSION

According to the classical references in *Ayurveda* the sting of *vr̥ścikā* can be treated successfully if it is in *sadhya*(easily curable) condition. Here we can make use of the previously given formulations which would give maximum relief to the patient. Finally, the author feels the need of further

research in both literature and clinical levels. This can improve the professional confidence for successful management of scorpion sting among the *Ayurvedic* fraternity in India even without antivenin.

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