

# Vrishchika Damsa WSR Scorpion Sting: A Review

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## Abstract

There are tremendous health hazards associated with scorpion stings, especially in tropical and subtropical areas. In Ayurvedic medicine, the adverse impacts of scorpion stings are referred to as Vrishchika Damsa, and classical literature constantly recognize this illness as one that needs to be treated right away. The objective of the article is to provide a general overview of scorpion envenomation, emphasizing the relevance to the system of Ayurvedic medicine, namely Vrishchika Damsa to modern clinical treatment. In order to deal with scorpion stings, this article addresses the etiology, clinical symptoms, traditional Ayurvedic interpretation, and contemporary therapeutic techniques. It also contrasts the treatment ideologies of Ayurveda and conventional medicine and highlights areas that require additional investigation.

**Keywords:** Scorpion Sting, Vrishchika Damsa, Ayurveda, Envenomation, Clinical Management, Traditional Medicine, Toxicology.

## Introduction

In India, scorpion stings are a terrible issue, particularly in rural areas. An estimated 12 lakh persons are envenomated by scorpions annually, which results in approximately 3250 fatalities. Only 53 of the approximately 1400 species of scorpions known to exist in the globe are thought to pose a threat to humans. Sharp, localized burning pain that eventually spreads to the entire limb, followed by varying degrees of tingling in the and edema, is the typical clinical characteristic of scorpion stings. In cases of scorpion sting that go untreated, even death occurs right away. Urdhwa Gati of Daha, Toda, Sphutana, Sotha, Shyavata, and so on are some of its warning indicators. Vrishchika Damsa is traditionally associated with intense local pain, swelling, and systemic symptoms such as fever, vomiting, and even paralysis, depending on the species of scorpion and the individual's response to the venom. This review aims to explore the Ayurvedic understanding of Vrishchika Damsa and correlate it with modern scientific knowledge on scorpion venom toxicity [1]. Specifically in regions with a high prevalence of scorpions, involving parts of India, Africa & Latin America, scorpion stings are a leading cause of morbidity and mortality. The venom of various kinds of scorpions, particularly those in the family of Hottentotta tamulus (Indian Red Scorpion), is known to cause clinical symptoms that range from minor discomfort to severe systemic reactions, including death [2]. In the traditional Indian medical system of Ayurveda, the term Vrishchika Damsa is used to describe the toxic effects caused by a scorpion sting.

## Methods

A comprehensive literature review was conducted using phrases like "Vrishchika Damsa," "scorpion sting," "Ayurveda," "scorpion envenomation," and "scorpion venom" in many kinds of databases, including PubMed, Google Scholar, and Ayurvedic research documents. For the purpose of gathering relevant data, both contemporary clinical studies and ancient Ayurvedic writings, such the Charaka Samhita, were reviewed. The review aims to gathering data addressing the following:

- The Ayurvedic description of *Vrishchika Damsa*. [3]
- The pathophysiology of scorpion venom.
- Clinical manifestations and management strategies.
- Comparative analysis of Ayurvedic and contemporary treatment methods.

## Pathophysiology of Scorpion Venom

- Scorpion venom is a complex mixture of proteins, peptides, enzymes, and other molecules that can have various effects on the human body [4].
- The primary toxins in scorpion venom include neurotoxins that affect the sodium channels in nerve cells.
- Leading to excessive neurotransmitter release and subsequent neural dysfunction. In severe cases, this can result in respiratory failure, cardiovascular collapse, or even death.
- The venom also contains cytotoxins and hemotoxins, which can cause local tissue necrosis, hemolysis, and hemoconcentration.
- The venom acts both locally and systemically, with symptoms that range from mild burning sensations at the sting site to systemic manifestations such as muscle cramps, tachycardia, hypotension, and convulsions.

## Clinical Manifestations of Scorpion Sting

- According to Ayurvedic texts, *Vrishchika Damsa* presents with *Ruja* (pain), *Sopha* (swelling), *Aruchi* (loss of appetite), and *Jwara* (fever) [1].
- Above symptoms align with the systemic responses observed in scorpion envenomation, including local pain, swelling, and redness at the sting site, as well as systemic symptoms like fever, chills, and gastrointestinal distress.
- Severe envenomations can lead to autonomic instability, manifesting such as- tachycardia, hypertension, and in some cases, respiratory failure.
- In extreme instances, neurotoxic effects such as seizures, coma, and paralysis have been documented.

## Ayurvedic Treatment and Management

Traditional Ayurvedic texts suggest the use of herbal remedies, detoxification techniques (Shodhana), and Rasayana (rejuvenating) therapies to treat scorpion stings. Commonly recommended herbs include:

- **Ashwagandha** (*Withania somnifera*): Known for its neuroprotective and anti-inflammatory properties.
- **Gokshura** (*Tribulus terrestris*): Used for its diuretic and anti-inflammatory effects.
- **Neem** (*Azadirachta indica*): Known for its antimicrobial and detoxifying properties.

Ayurvedic therapies focus on balancing the doshas (Vata, Pitta, and Kapha), with specific emphasis on Pitta dosha, which is believed to be aggravated by the venomous nature of the sting.

## Allopathic Treatment of Scorpion Stings

- The modern medical approach to scorpion stings involves symptomatic management.
- Primary goals being pain control, stabilization of vital signs, and prevention of complications.
- Antivenom therapy is available in regions where dangerous scorpion species are prevalent.
- Other treatments include intravenous fluids, analgesics, anticonvulsants, and sedatives. In severe cases, mechanical ventilation may be necessary.

## Comparative Analysis of Ayurvedic and Modern Treatment Approaches

While contemporary medicine concentrates on using antivenoms to neutralize venom and directly handle symptoms, Ayurveda provides a more comprehensive strategy that seeks to bring the body back into equilibrium. While ayurvedic treatments might not directly counteract the venom, they might lessen its systemic effects by boosting general tolerance and aiding in detoxification. Both systems promote the importance of quick action, but because of the different therapeutic ideas, the clinical results may vary. Combining contemporary pharmaceutical therapies with Ayurvedic methods may provide a complementary approach to treating scorpion stings, especially in places with little access to contemporary medical facilities [5].

## Discussion

Particularly in tropical and subtropical areas, scorpion stings remain a serious health concern. While contemporary medicine offers supportive treatment and antivenom, Ayurvedic techniques offer an alternative framework for managing symptoms and preventing subsequent complications. The pathophysiology of scorpion venom reveals a complicated relationship between local and systemic harmful effects.

Future studies should concentrate on establishing a connection between modern and traditional medicine. Research studies examining the effectiveness of Ayurvedic herbal medications, both on their own and in combination with allopathic treatments, may provide fresh perspectives on alternative treatment approaches. Further research is also required to examine the biological features of scorpion venom and how Ayurvedic remedies can lessen them.

Standardizing treatment regimens that may be used globally while accounting for differences in scorpion species, geographical locations, and patient responses is still an issue [6]. Specifically, further research should be done on how herbal remedies can lessen venom toxicity or improve healing.

## Conclusion

Scorpion stings, known in Ayurveda as Vrishchika Damsa, provide a complex medical problem because of the venom's adverse effects and the variety of clinical manifestations and illnesses. Modern medicine mostly concentrates on treating symptoms and using antivenoms, but Ayurvedic remedies are beneficial supplements, especially when it comes to enhancing the body's resistance and treating the underlying imbalance brought on by the venom. For victims of scorpion envenomation, more study integrating [6] Ayurvedic and contemporary methods may improve clinical results, especially in environments with limited resources.

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