

In Poison

Scorpion Sting

Introduction:

- Scorpions are a common arthropod on every continent except Antarctica.
- If threatened, a scorpion may use its long, flexible tail to sting a potential predator.
- People unknowingly come into contact with these species and experience the painful sensation of envenomation.

Etiology:

- Roughly 1750 species of scorpions in world, only 25 - lethal to humans.
- In most cases, the sting of a scorpion causes pain but is relatively harmless.
- Scorpions may sting many times, but their venom becomes depleted with each sting.

Epidemiology:

- The effect of the scorpion sting is highly dependent on the species.
- While species like Centruroides and Parabuthus cause neuromuscular issues, Buthus, Mesobuthus, and Androctonus exhibit life-threatening cardiovascular effects.

Clinical Features:

- Local inflammatory reaction and pain.
- When the venom affects the sodium channels - may manifest as seizure-like activity in the patient and obscure the clinical picture.
- Intubation may be required, as motor hyperactivity of the pharyngeal muscles and uncontrolled diaphragmatic and intercostal neuromuscular activity may occur. These symptoms may progress quickly, causing impending airway collapse.
- In the select species causing cardiopulmonary effects, tachycardia, pulmonary edema, and more importantly, cardiogenic shock may be present.
- While uncommon, there are documented cases of local tissue necrosis days to weeks after the initial sting.

Diagnosis:

History and physical most commonly diagnose scorpion stings.

Erythematous area on the skin with local inflammation. Numbness and weakness at the site may also occur.

Basic laboratory studies - complete blood count, PT/INR, PTT and lipase.

Treatment:

- Most stings only - supportive therapy including ibuprofen & cleaning of the sting area and tetanus prophylaxis & under observation for at least 4 hours.



The Medical **Bulletin**

- In severe symptoms such as hyper-salivation, clonus, rapid eye movements, or restlessness - immediate intervention is critical. May need endotracheal intubation due to severe pulmonary edema. As cardiogenic shock can complicate this, the administration of dobutamine.
- Intravenous benzodiazepines - if muscle spasticity.
- Antivenom (intravenous scorpion-specific F(ab')₂ equine) for skeletal muscle, or cranial nerve dysfunction who are stung by either Centruroides or Parabuthus.
- Three vials in 20 to 50 mL of normal saline and IV infused over 30 minutes.
- Should give within 4 hours of the sting.
- IV fluids, epinephrine, and intubation equipment should be made available before the administration of the antivenom in case of anaphylactic shock.

Dr. C. Naveen Kumar
Kangayam.