

First Aid



A scorpion sting can be life threatening.

The only valid advice is to transport the patient to a health center as fast as possible, where she/he will be medically evaluated and treated, if required.

Do not waste time!

This english version has a special collaboration from:

- Dr. Eugene Erulu

- Sanda Ashe

Bio-Ken Snake Farm, Watamu Kenya

<http://bio-ken.com/>

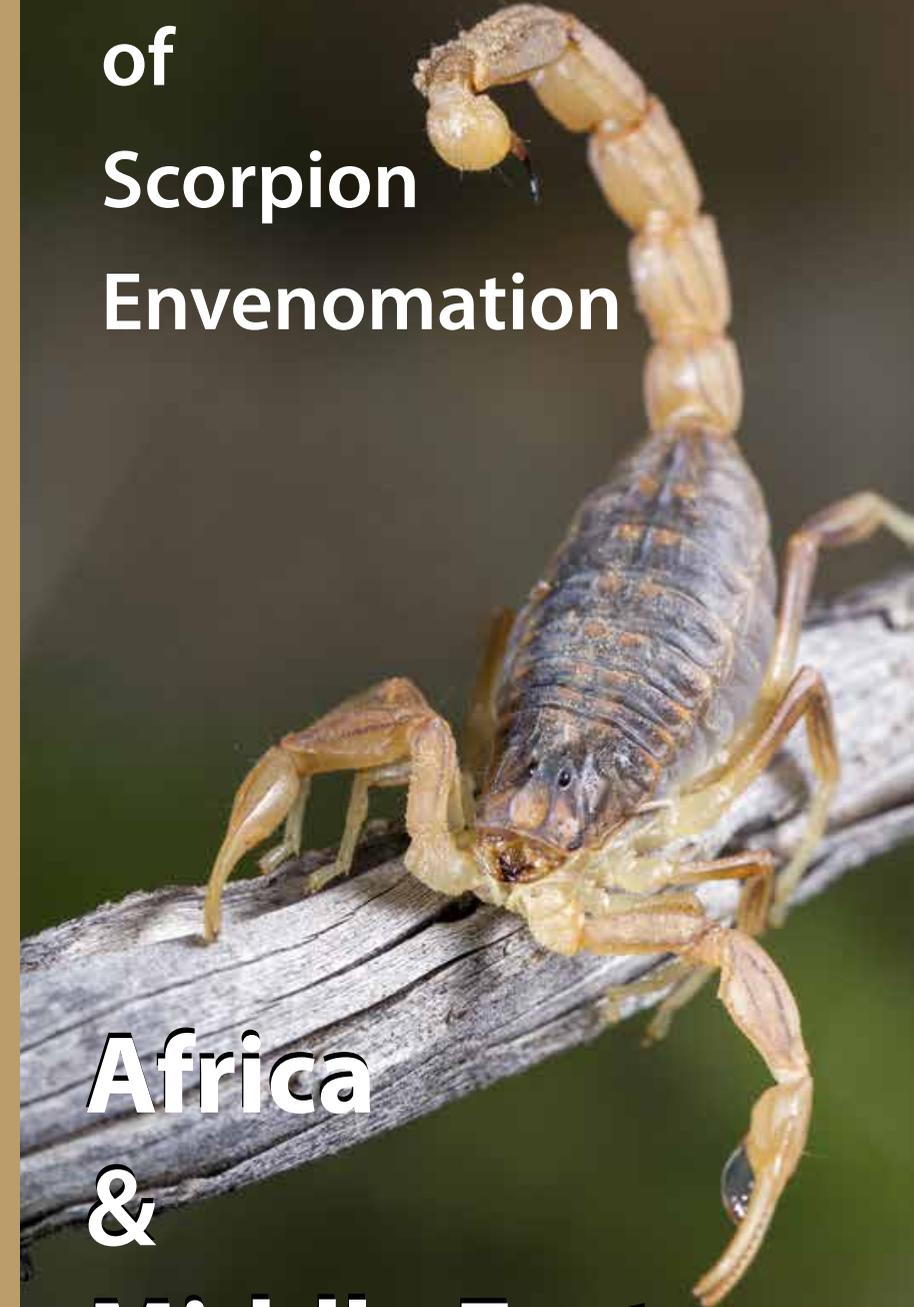


Société
Africaine de
Venimologie



African
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Venimology

Management of Scorpion Envenomation



Africa & Middle East

MANAGEMENT OF SCORPION ENVENOMATION IN AFRICA & MIDDLE EAST

CONFIRM & EVALUATE THE ENVENOMATION

In a person reporting a scorpion sting:

Reassure the patient and his relatives. Ask when he/she was stung.

Local and general examination to be completed in order to estimate the gravity (Give a clinical grade).

Clinical observation of 3 hours minimum; in children of less than 5 years, symptoms may be erratic and violent with a variety of movements or unexplained crying.

In an endemic region and in a high-risk period, it is necessary to suspect diagnosis of scorpion sting in an infant presenting with unexplained screaming and crying.

It is essential to grade the degree of envenomation, from the arrival of the patient at the hospital, to be repeated if needed in order to adapt the treatment.

GRADES OF ENVENOMATION:

GRADE 1: Localized Symptoms

- Variable pain around the sting without general signs: sting without systemic envenoming.

GRADE 2: General & Systemic Symptoms

- Temperature = 38°C;
- Digestive disorders: nausea, vomiting, abdominal bloating, and diarrhea;
- Neurological disorders: Drowsiness or Agitation, Fasciculation of the stung limb, Hyper salivation.
- *Cholinergic syndrome* (Vomiting, Drooling, Increased Perspiration, Whimpering, Miosis, Priapism, Bronchial Groaning, Bradycardia) or
- *Adrenergic storm* (Palpitation, Peripheral Vasoconstriction, High Blood Pressure, Mydriasis).

GRADE 3: Life-threatening vital prognosis

- Cardiac disorders (=scorpionic myocarditis):
ECG: arrhythmia, QT elongation, repolarization disorders; Echocardiography: reduction in the systolic ejection fraction (50 %) with or without disorders of the myocardial kinetics.
- Respiratory disorders: acute pulmonary edema (APE), cyanosis, dyspnea.
- Neurological disorders; agitation, convulsions, coma (Glasgow \leq 6 without drug-induced sedation).
- Autonomic nervous system disorders: temperature \leq 39°C.

Biological signs:

- Leucocytosis, CRP positive, hyperglycemia, \uparrow lactic acid, \uparrow CPK, \uparrow Lipase, \uparrow cardiac and hepatic transaminases, \uparrow amylase, electrolytic disorders.

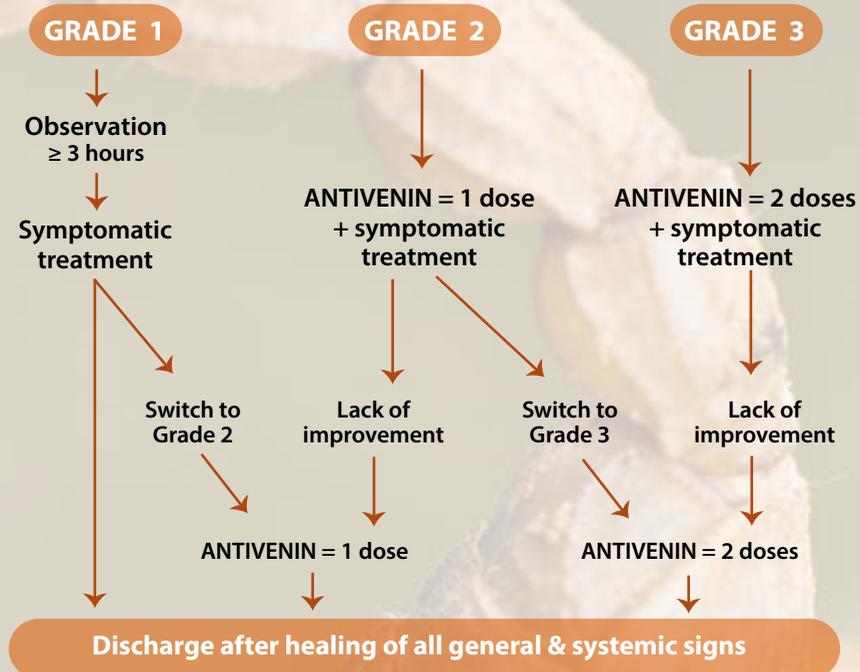
Remark:

Hemiscorpius lepturus (Iran and Iraq) provoke severe disorders of blood coagulation, which require a different symptomatic treatment.

CARE & TREATMENT

A. ANTIVENOM (at grade 1)

The antivenom is always administered intravenously, either in perfusion (diluted in 1/10) during 30 minutes, or directly (IVD) in 3 minutes for every 10 ml.



Caution on the vulnerability and speed of evolution in children and pregnant women.

B. Symptomatic treatment (associated to antivenin)

According to the available means and knowledge of medical staff:

- Observation 3 hours minimum.
- **Local pain:** (Grade 1) → salicylic acid or paracetamol and an anti-inflammatory drugs at analgesic dosages. If necessary, infiltration of point of sting by local anesthetic.
- **Digestive disorders:** (Grade \geq 2) → Correction of hydro-electrolytic disorders, antispasmodic.
- **Cardiorespiratory disorders:** (Grade \geq 3) → In case of OAP = dobutamine perfusion 10 à 20 $\mu\text{g}\cdot\text{kg}^{-1}$ per minute.
- **Neurological disorders:** → Correction of arterial hypotension or hypertension. Ensure there is good cerebral oxygenation. **Excitation = chlorpromazine.**
- **Respiratory distress:** → Assisted or controlled ventilation.

Caution:

- Morphine and analogs (tramadol, codeine) and benzodiazepines → risk of respiratory distress.
- Parasympatholytics (atropine) aggravate adrenergic storm and reduce thermoregulation. Accordingly, **atropine is reserved to bradycardia.**

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