

A STUDY ON THE CLINICAL PROFILE AND OUTCOME OF CHILDREN WITH SCORPION STING IN TERTIARY CARE HOSPITAL JHALAWAR, RAJASTHAN

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Abstract

Background: Scorpion sting envenomation is a life threatening emergency in tropical and subtropical countries with a potential of severe and often fatal clinical manifestations among children.

Methods: This retrospective study was conducted in a tertiary care centre in Jhalawar (Rajasthan) over a period from 1 April 2019 to 30 Sept. 2019. Total 26 children admitted with a history of scorpion sting were included in this study.

Results: With regard to severity, 7 (26.92%), 15 (57.69%), and 4 (15.38%) patients were classified into classes I, II and III, respectively. The duration of hospitalization ranged from 1 to 5 days with mean hospitalization stay of 2.36 ± 1.2 days. The duration was longer in younger children and the patients who reported to the hospital very late. All patients were discharged after complete recovery.

Conclusion: Scorpion sting envenomation is a common medical emergency among children. It is common in rural areas and among boys. The site of sting was predominantly in the lower limbs and during nights of summer season.

Keywords: Scorpion sting, Children, Rural.

Introduction

Scorpion sting envenomation is a life threatening emergency in tropical and subtropical countries with a potential of severe and often fatal clinical manifestations among children.¹⁻³ There are 2000 subspecies of scorpions worldwide, with 50 subspecies having venom dangerous for humans. In India, only two species, *Mesobuthus* (red) and *Palamnaeus* (black), are poisonous scorpion. *Mesobuthus tamulus* (Indian red scorpion) is the most lethal scorpion species.

These are found abundantly in western Maharashtra, northern Karnataka, Andhra Pradesh, Saurashtra and Tamilnadu.⁴ The clinical manifestations of scorpion sting envenomation are due to a massive release of sympathetic and parasympathetic neurotransmitters.^{5,6}

The present study was aimed to study the clinical profile of scorpion sting envenomation and outcome in children.

Material and Methods

This retrospective study was conducted in a tertiary care centre in Jhalawar (Rajasthan) over a period from 1 April 2019 to 30 Sept. 2019. Total 26 children admitted with a history of scorpion sting were included in this study.

Data were extracted from the case records of children admitted with positive history of scorpion sting, with

scorpion being seen or killed by relatives or bystanders. Data recorded for each case included: age and sex of the patient, site of scorpion sting, time lapsed from the scorpion sting to hospitalization, season, clinical manifestations, duration of hospital stay, and outcome.

The severity of envenomation was classified according to Abroug's classification as follows.

Severity class I: Local symptoms including local pain, erythema and paresthesia restricted to the sting area.

Severity class II: Shivering, cool extremities, excessive sweating, nausea and vomiting, hypertension, and priapism.

Severity class III: Cardiovascular, respiratory or neurological symptoms such as cardiogenic shock, pulmonary edema, altered consciousness, and convulsive crisis.

All cases were treated according to treatment protocol of the institute. Patients with cold extremities, sweating, and tachycardia were treated with oral prazosin. Patients with features of shock and myocarditis were treated with prazosin plus dobutamine. All patients were monitored till the signs of recovery. We did not use anti-venom in any patient. The data was analyzed using appropriate statistical method.

Results

Mean age of children was 7.21 ± 2.31 Yrs. 17 children were male and 9 children were female. Out of 26 children, 18 children were from rural area.

Table 1: Site of scorpion sting envenomation

Site of sting	Number	Percentage
Lower limb	13	50.00
Upper limb	9	34.62
Trunk	3	11.53
Head and neck	1	3.84
Total	26	100.00

In our study 50.00% children lower limb was involved followed by 34.62% children upper limb was involved.

Table 2: Clinical profile sting envenomation

Clinical profile	Number	Percentage
Local pain	23	88.46
Redness	18	69.23
Swelling	6	23.07
Itching	16	61.53
Numbness	7	26.92
Cold extremities	22	84.61
Sweating	19	73.07
Tachycardia	7	26.92
Hypotension	4	15.38
Hypertension	3	11.58
Altered sensorium	2	7.69

Local pain was most common symptom followed by cold extremities was most common sign.

Table 3: Severity of scorpion sting envenomation

Severity	Number	Percentage
Class I	7	26.92
Class II	15	57.69
Class III	4	15.38

With regard to severity, 7 (26.92%), 15 (57.69%), and 4 (15.38%) patients were classified into classes I, II and III, respectively.

The duration of hospitalization ranged from 1 to 5 days with mean hospitalization stay of 2.36 ± 1.2 days. The duration was longer in younger children and the patients who reported to the hospital very late. All patients were discharged after complete recovery.

Discussion

Scorpion sting envenomation is one of the common medical emergencies among children, especially in rural areas.

In the present study, maximum number of scorpion sting among children has occurred in the age group of 5 to 10 years, whereas Pol R et al reported 2-7 years as most involved group.⁶ Boys were stung more often girls. Similar findings were observed by other studies.^{7,8} This male predominance of scorpion sting may be due to higher inquisitive nature of boys and boys go outside more commonly than girls, especially during night. There is higher incidence of scorpion sting in rural areas.

Majority of the children the site of scorpion sting was lower limbs, which was similar to Pol et al, Bosnak et al and Farhly et al's observations.^{7,9,10}

The local symptom of scorpion sting include pain at the site of sting (most common), followed by redness, swelling, itching and numbness. The common systemic signs include cool extremities, sweating, and tachycardia. Cold extremities were reported in majority of patients in their studies by Bawaskar et al and Biswal et al.^{1,11}

Conclusion

Scorpion sting envenomation is a common medical emergency among children. It is common in rural areas and among boys. The site of sting was predominantly in the lower limbs and during nights of summer season.

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