

Clinical Manifestations in Scorpion Sting-A Prospective Study In GGH Nalgonda

Dr.C.Yadavendra Reddy¹M.D.

¹(Assistant Professor Department Of Medicine, Government Medical College Nalgonda / Knu,India)

Abstract: Scorpion sting is a common medical emergency occurring which is hazardous and lethal if not treated properly. Scorpion sting is a major health problem in tropical and subtropical countries; the fact that many of these areas are underdeveloped, the problem is not properly assessed and the consequences are underreported owing to poor medical facilities.^{1,2} The aim of this study is to study the various clinical manifestations in scorpion sting cases admitted to GGH Nalgonda from Feb 2019 to May 2019. A total of 60 cases of scorpion sting admitted in GGH Nalgonda during this period were studied. Scorpion sting envenomation is a relatively common health problem. The commonest manifestation is pain with paraesthesia. The Scorpion envenomation can be lethal and dangerous if proper care is not taken and drugs administered properly.

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I. Introduction

In the struggle for existence the fittest survives. Undoubtedly man has proved himself to be the fittest of all the living things. Still his fitness is tested by inferior mortals, which include microorganisms like bacteria, viruses and other microbes and the macroelements which include other animal population. Notably among these are arthropods and among the arthropods the scorpions stand out prominently as frequent and notorious offenders. Scorpion sting is a major health problem in tropical and subtropical countries, the fact that many of these areas are underdeveloped, the problem is not properly assessed and the consequences are underreported owing to poor medical facilities.^{1,2} Because of this the true incidence of this common rural to some extent occupational hazard is not known. There are about 1500 species worldwide, 50 are dangerous to humans. Almost all the lethal scorpions belong to Buthidae family.³ There are about 86 species of scorpions found in India.^{1,2} ONLY three scorpions found in India are poisonous they include 1. Mesobuthus tamulus 2. Palamreus swammerdeni 3. Heterometrus bengalensis. In Nalgonda Heterometrus bengalensis is common.⁴ Despite the geographic differentiation there is no difference in symptomatology following envenomation. Scorpions are not aggressive, they do not hunt for prey, they wait for it. Envenomation due to scorpion sting results in various clinical manifestations, they range from mild local pain to diffuse irremediable pain of whole limb and body to systemic manifestations involving almost all systems, predominantly vascular and may sometimes lead to death.^{3,5} Most of the manifestations of scorpion envenomation are due to stimulation of ANS either directly or indirectly resulting in various autonomic disturbances; most important is autonomic storm.^{5,6} Various treatment modalities are available for scorpion sting which are broadly classified into local measures and systemic measures. Locally, xylocaine infiltration, systemic is oxygen inhalation, glucose infusion, nifedipine and prazosin are used as pharmacologic antidote for scorpion sting.

II. Materials and Methods

This prospective comparative study was carried out on patients of Department of general Medicine at GGH Nalgonda, Telangana from February 2019 to May 2019. A total of 60 patients (both male and females) of aged ≥ 12 , years were for in this study.

Study Design: Prospective observational study

Study Location: This was a tertiary care teaching hospital based study done in Department of General Medicine, at GGH Nalgonda Telangana.

Study Duration: February 2019 to May 2019.

Sample size: 60 patients.

Sample size calculation: The subjects were taken from the patients admitted with scorpion sting during the study period.

Inclusion criteria

1. Both males and females
2. Aged ≥ 12 years,
3. Admitted within hours of envenomation.

Exclusion criteria

1. Pregnant women;
2. Patients with genetic disorders
3. Patients with history of hypertension
4. Patients with history diabetes mellitus

III. Results

Most of the patients presented with pain and paraesthesias without systemic manifestations. Some patients presented with pain and paraesthesias along with systemic manifestations. Like tachycardia, sweating. All were done necessary investigations. Demographic features like age, sex, time since sting to the arrival to the hospital and clinical parameters like pain at the site of sting, swelling, paraesthesia, profuse sweating were studied. All patients received tetanus toxoid depending on immunization status. All patients with local pain were studied.

Out of the 60 patients male incidence was more with 40 patients [66.6%] and females were 20 patients [33.3%]. Most of the patients affected were in the age group of 20-30 years. The mean age of incidence was about 30 years. Out of the clinical manifestations 30 [50%] had pain, 10 [16.6%] presented with paraesthesias, 7 [14.4%] had hypertension, 5 [8.3%] had edema and 2 [3.3%] had hyperkalemia.

Table 1. Gender Distribution

Table 1 shows gender distribution between males and females. The males were around 40 and females were around 20. Male to female incidence was around 2:1

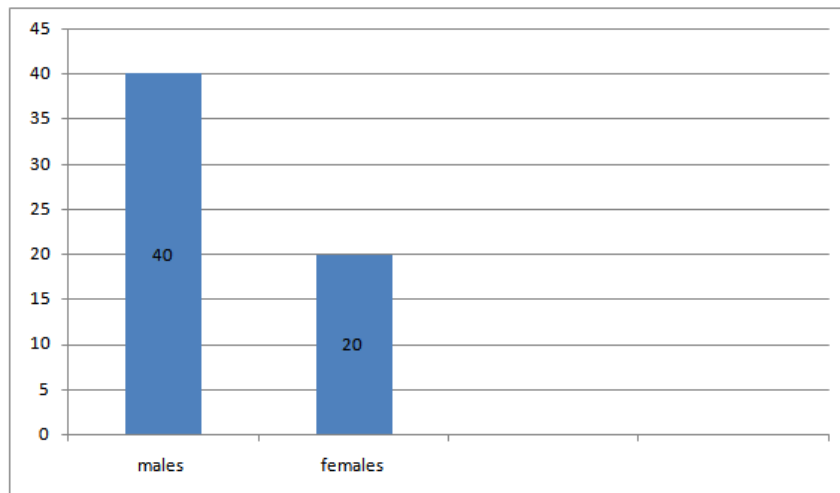


Table 2. Age Distribution

Table 2 shows age wise distribution of the patients. The patients were more in the age group 20-30. The mean age of incidence was around 30 years.

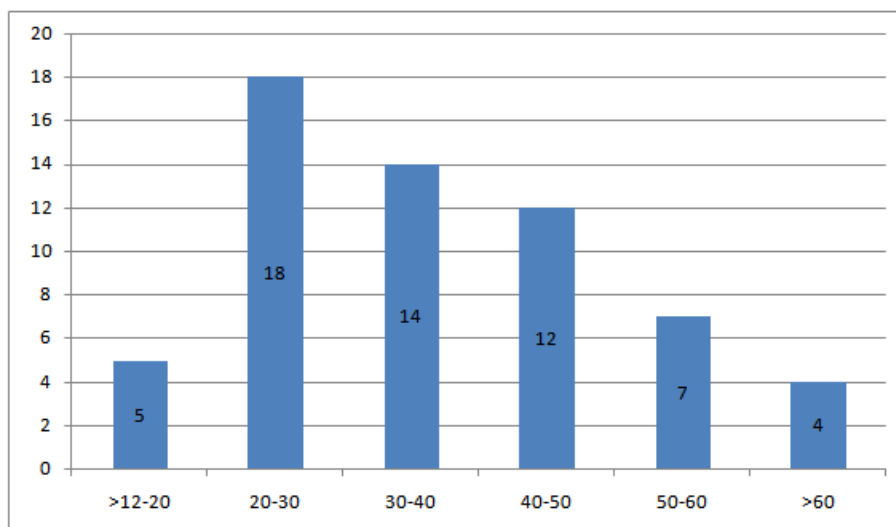
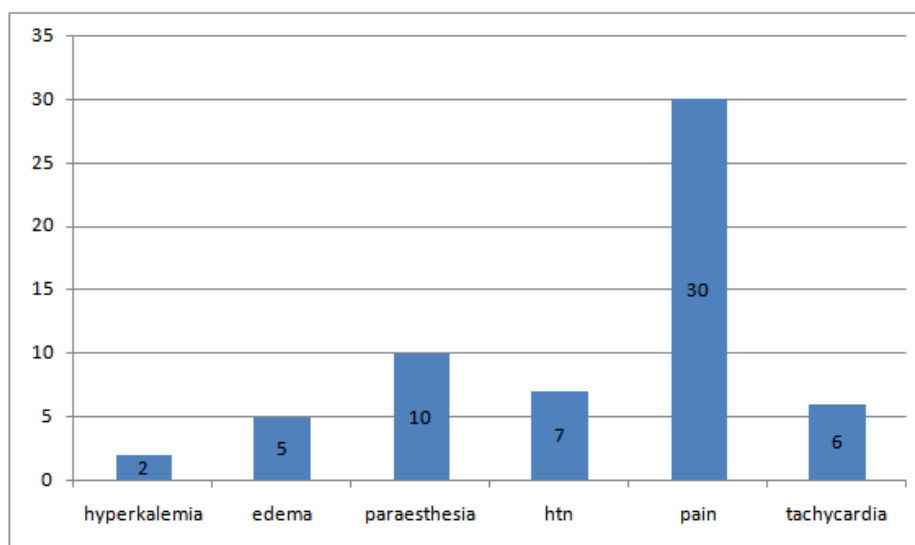


Table 3.Symptom distribution in patients

Table 3 shows symptom distribution in the scorpion sting patients.it depicts pain was the prominent symptom in the patients affecting 30 patients.life threatening manifestations like tachycardia and hyperkalemia were less indicating the less severity in the admitted patients.



IV. Discussion

Pain was the prominent symptom in the patients presented to the hospital.though the patient responded to the initial treatment the systemic manifestations with cardiorespiratory problems were less noted in the hospital. The persistence of pain with or without radiation varied greatly.IN some pain lasted for few minutes while in some lasted for several hours.some patients required local infiltration with lignocaine.pain as a symptom of scorpion sting is so common that in patient complaining of pain with histoyofbite or sting by unidentified creature scorpion sting should be suspected.It is noted that thosewith severe pain had relatively milder systemic manifestations and majority of patients with severe envenomation had mild pain in accordance with Bawaskar H.N.⁸paraesthesias may be duetoocal inflammatory response or due to local effect of scorpion venom.Tachycardia was observed in some patients may be due to anxiety and it is possible that tachycardia may be anexpression of sympathetic overactivity because it was associated with persistent symptoms of sympathetic overactivity.Few patients developed edema along with pain.Hyperkalemia may be due to the effect of the venom on the voltage sensitive sodium potassium channels.In some case the venom effect may be so severe affecting the kidneys causing nephropathy.hypertension may be due to the activity by the venom.

V. Conclusion

The study conclude that pain was the most common presentation in the scorpion sting followed by paraesthesias.Itwas noted that patients with mild pain at presentation had more systemic manifestations.Further few patients presented with hypertension and with other significant abnormalities.It is understood from the study that proper and immediate care with prompt admission to the hospital could tackle the hazardous scorpion sting envenomation which may lead to death.

References

- [1]. Das s nalini,anankrishnanetal scorpion envenomation in children in south india J Trop Med,oct 1995;98[5]306-8
- [2]. Shankar mahadevanetal,scorpion sting envenomation Indped May 2000,37:504-514.
- [3]. David Cheng etal scorpion sting e medicine july 18,2002.
- [4]. David A warrel envenoming by snakes and venomous arthropods-oxford textbook of medicine oxford univ press;2003,pp923-45
- [5]. Ismail M The scorpion envenoming syndrome Toxicon-1995,Jul;33[7]:825-58
- [6]. Yarom,R Scorpion venom-a tutorial review of its effects in men and experimental animals.Clinical Toxicology-1970Dec;3[4]:561-9
- [7]. Bawaskar H.S. and BawaskarP.H.Prazosin in the management and cardiovascular manifestations of scorpion sting lancet 1986.mar 1;1[8479]:510-1
- [8]. Bawaskar-symptoms and signs and treatment of indianredscorpionenvenomation.medicine update APICON-API 1998:475-6

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