

Uncommon presentation of scorpion sting at teaching hospital

Dear Editor,

We read with great interest article by Pradeep *et al.*^[1] in their case, author did not use prazosin in management of sever scorpion sting with pulmonary edema. Scorpion venom includes mixture of low molecular weight peptide toxin, which targets the ion channel. Alfa toxin inhibits the inactivation of neuronal sodium channels and resulting in a sustained depolarization and neuronal excitation. As results of this, there is autonomic storm in the body leading to pouring of endogenous catecholamines (epinephrine and norepinephrin), Neuropeptide –Y and endothelin-1.^[2] In severe scorpion sting, sustained Alfa receptor stimulation results in development of pulmonary edema, in addition to catecholamine-induced myocarditis and myocardial ischemia due to Neuropeptide –Y.^[2] Epithelial sodium channels, cystic fibrosis transmembrane conductor, and Na/K-ATPase clear the lung edema. Scorpion venom inhibits alveolar fluid clearance through Endothelin-1. As it impairs the fluid clearance in alveoli.^[3] This results in development of pulmonary edema. Prazosin is pharmacological antidote of scorpion envenomation. Prazosin inhibiting phospodiestrace, result in cellular accumulation of cyclic GMP-an endothelin inhibitor, clears pulmonary edema, and corrects the hemodynamic and metabolic effects of envenomation.^[2] Prazosin reduces preload and increases the left ventricle compliance.^[2] Thus in severe case of scorpion envenomation, use of prazosin and dobutamine will reduce overall morality and recovery time.^[4] Noradrenalin will worsen the situation as its predominant Alfa -1 agonist action. Poisonous species of scorpions are present all over India. Monospecific scorpion Antivenom should be made available, at all places where scorpion venomation is common. Recently, in scientific trials, it has confirmed that simultaneous use of prazosin and ant scorpion venom use reduces the cardiovascular mortality and morbidity and prevent Extra load of these cases to intensive care unit, which is beyond the reach of poor people.^[5]

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Santosh Govind Rathod

Department of Pathology, Subdistrict Hospital Mangaon,
Dist Raigad, Maharashtra, India

Address for correspondence: Dr. Santosh Govind Rathod,
Kool Homes Green Valley, Bavdhan Pune,
Maharashtra - 411 021, India.
E-mail: drsgrathod2007@gmail.com

References

1. Pradeep YK, Bhogaraju VK, Pathania M, Rathur VK, Kant R. Uncommon presentation of scorpion sting at teaching hospital. *J Family Med Prim Care* 2020;9:2562-5.
2. Isbister GK, Bawaskar HS. Scorpion envenomation. *N Engl J Med* 2014;371:457-63.
3. Comellas AP, Brivia A, Dada LA, Butti ML, Trejo HE, Yshii C, *et al.* Endothelin -1 impairs alveolar epithelial function via endothelial ETB receptor. *Am J Respir Crit Care Med* 2009;179:113-22.
4. Patil SN. A retrospective analysis of a rural set up experience with special reference to dobutamine in prazosin resistant scorpion sting cases. *J Assoc Physicians India* 2009;57:301-4.
5. Bawaskar HS, Bawaskar PH. Efficacy and safety of scorpion Antivenom plus prazocin compared with prazocin alone for venomous scorpion (*Mesobuthas Tamulus*) sting: Randomised open lable clinical trial. *BMJ* 2011;342:C7136. doi: 10.1136/bmj.c7136.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Received: 11-06-2020

Revised: 19-06-2020

Accepted: 20-06-2020

Published: 25-08-2020

Access this article online

Quick Response Code:



Website:
www.jfmpc.com

DOI:
10.4103/jfmpc.jfmpc_1149_20

How to cite this article: Rathod SG. Uncommon presentation of scorpion sting at teaching hospital. *J Family Med Prim Care* 2020;9:4480.

© 2020 Journal of Family Medicine and Primary Care | Published by Wolters Kluwer - Medknow