http://jmscr.igmpublication.org/home/
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v8i6.32

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

A Rare Complication of Snake Bite

Authors
Dr Sunil K Agarwalla[1], Dr Sudipta Sahoo[2]
[1]Associate Professor, MKCG MCH, Berhampur, Ganjam, Odisha
[2]SR, MKCG MCH, Berhampur, Ganjam, Odisha

Abstract
Snake bite is a common medical emergency in India, associated with significant mortality. Ocular complications of snakebite may be seemingly innocuous like conjunctival haemorrhage to vision threatening like optic neuritis, central retinal artery occlusion and angle closure glaucoma. Optic neuritis is a rare complication of snake bite. We describe a 11 year girl with neurotoxic snake bite with features of systemic envenomation, during the course of recovery developed sudden bilateral painless visual loss with clinical features suggesting retrobulbar neuritis. She made a complete visual recovery on initiation of therapy with corticosteroids. Early recognition and prompt initiation of steroids is key to visual recovery.

Introduction

Snake bite a common cause of morbidity and mortality in India, particularly in rural area. It may be considered as an occupational hazard. The toxins may be neurotoxic or hemotoxic, which mediate various downstream effects. The cause of mortality usually includes respiratory failure in neurotoxic snake bite and disseminated intravascular coagulation (DIC) and acute kidney injury (AKI) in hemotoxic snake bite. Ocular complications though common, are frequently under recognized. Retrobulbar neuritis is a rare but vision threatening complication of snake bite.

Case Report

We present a 11 year old girl with alleged history of unknown snake bite. She presented with vomiting, difficulty in breathing and unresponsiveness at admission nearly 4hours after snake bite. She was found to have hypoventilation with respiratory rate of 8/minute and paradoxical breathing, bilateral ptosis, mid-dilated sluggishly reacting pupils and quadriparesis. 20 minute whole blood clotting time (20WCT) was normal. A diagnosis of neurotoxic snake bite with systemic envenomation was made. She was managed with invasive ventilation, 20 vials of anti snake venom (ASV), atropine and neostigmine. There was improvement in weakness and she was extubated after 48 hours.

She remained apparently well for next 48 hours, then she developed acute onset bilateral painless diminution of vision, with visual acuity of perception of light (PL) in both eyes. Neurological examination was unremarkable except for mid dilated sluggishly reacting pupils. Fundus examination did not show any abnormalities. CEMRI brain and orbit was unremarkable. A probable diagnosis of retrobulbar neuritis was considered and she was started on pulse methylprednisolone for 5d followed by oral prednisolone for 7d. She started regaining vision

after 72 hours of steroids which improved rapidly almost by 120 hours of therapy. She was discharged after 10 days of admission, with visual acuity of 6/6 BE and no residual neurological deficits.

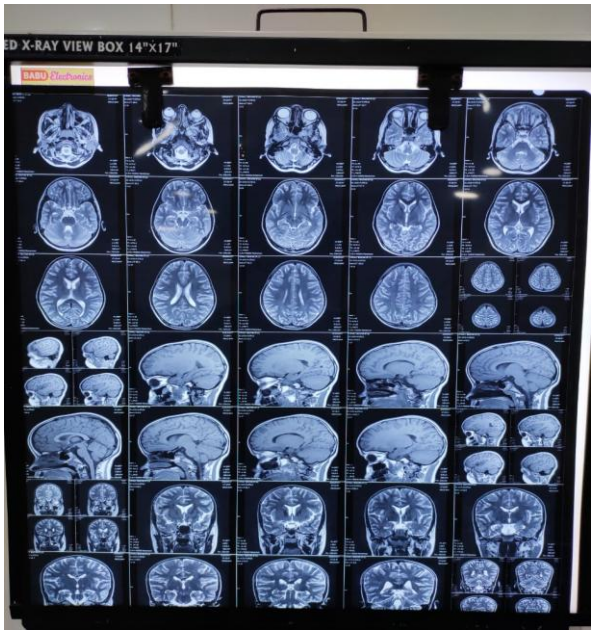

Fig 1 & 2 both depict MRI of brain representing horizontal, sagittal and coronal sections showing no abnormality

Discussion

Snake bite is a common medical emergency in tropical countries like India. A whole gamut of ocular complications of snake bite have been described ranging from non-severe complications like subconjunctival haemorrhage and ophthalmoplegia to vision threatening complications like angle closure glaucoma, anterior uveitis, haemorrhagic retinopathy, central retinal artery occlusion and optic neuritis[1]. Retrobulbar neuritis has been rarely described as a rare vision threatening complication following snake bite[2,3,4].

Retrobulbar neuritis typically presents as sudden onset painless visual loss, fundus evaluation and neuroimaging are usually normal. A variety of causes including demyelination, immune mediated and toxic causes have been implicated in the pathogenesis. However, snake bite has been rarely reported to cause optic neuritis. Most of the previously described cases report a latency of few days[2,3] (> 5 days), though it has been described within 24 hours of snake bite[5]. In our case it developed during the course of recovery on d5 of hospitalisation. The pathogenic mechanism is not entirely known, they may be possibly related to direct effects of toxin, immunological reactions to toxin or anti snake venom[6] (ASV) or vascular causes. Most of them traditionally treated with steroids with good visual outcome.

Conclusion

Although optic neuritis is a rare ocular complication of snake bite, it is potentially vision threatening. It requires a high index of suspicion. Early detection of this entity and timely initiation of steroids can aid complete visual recovery.

Declaration

The authors certify that they have obtained all appropriate patient (parents) consent form, in the form of images & clinical informations to be reported in the journal. The name and initials will not be published.

Conflict of Interest: Nil.

References

1. Praveen Kumar KV, Praveen Kumar S, Kasturi N, Ahuja S. Ocular Manifestations of Venomous Snake Bite over a One-year Period in a Tertiary Care Hospital. Korean J Ophthalmol. 2015; 29:256-62.

2. Menon V, Tandon R, Sharma T, Gupta A. Optic neuritis following snake bite. Indian J Ophthalmol. 1997;45:236–237.
3. Davenport RC, Budden FH. Loss of sight following snake bite. *Br J Ophthalmol* 1953;37:119-21.
4. Sahai AS, Sinha RH. Bilateral blindness following snake bite. *Indian J Ophthalmol* 1978;26:16.
5. Rao KV. Optic neuritis and ophthalmoplegia caused by snake bite. *Indian J Ophthalmol* 1981;29:243-45.
6. Mathur SP. Allergy to antivenom serum. *Br J Ophthalmol* 1959;43:50-51.