## CORRESPONDENCE



## Acute Demyelination Following Snake Bite – An Unusual Complication

Sivasambo Kalpana<sup>1</sup> · Suwethaa Ravi<sup>1</sup> · T Muthu<sup>2</sup>

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To the Editor: Common central nervous system complications following snake bite envenomation include intracranial hemorrhage and ischemic stroke other than acute neuromuscular toxicity. We report a rare complication after snake bite neurotoxicity. An 11-y-old male child was brought with history of snake (krait) bite. On arrival, he was received in cardiac arrest and was revived after cardiopulmonary resuscitation. Antisnake venom (ASV), neostigmine and atropine were administered and child was mechanically ventilated. During this time, the child was unresponsive, with eyes in mid-position, sluggishly reacting pupils and intact doll's eye movement. The power in all 4 limbs was 0/5, with absent reflexes and hypotonia. WBCT, blood counts, renal and liver function tests were normal.

On day 3, child became hemodynamically stable. On day 7, child was extubated and was able to respond to commands. But subsequently on day 9, he had multiple episodes of abnormal posturing with irritability and teeth grinding. Clinical examination revealed flaccid quadriparesis and aphasia. Reflexes, tone and plantar reflex were variable. Cranial nerves and sensory system examination were normal. Since, the clinical deterioration following initial improvement was inexplicable, MRI brain was done which was normal with no hypoxic changes.

From the clinical picture, demyelination was suspected and MRI of brain and spine with contrast was done. T2 weighted images showed areas of increased signal intensities suggestive of acute demyelination encephalomyelitis (ADEM). CSF analysis was sterile with mild elevated proteins, further adding on to the diagnosis of ADEM. He was managed with parenteral methylprednisolone followed by oral steroids. There was complete neurological recovery.

Clinical presentation, course, CSF analysis and quick recovery with steroids favour post snake bite demyelination. In addition to the vascular complications affecting the brain, cases of Guillain Barré syndrome and delayed cerebellar ataxia have also been reported following snake bite envenomation [1, 2]. However, acute demyelination is a rare complication following snake bite [3].

## **Declarations**

Conflict of Interest None.

## References

- Del Brutto OH, Del Brutto VJ. Neurological complications of venomous snake bites: a review. Acta Neurol Scand. 2012;125:363–72.
- Srivastava A, Taly AB, Gupta A, Moin A, Murali T. Guillainbarré syndrome following snake bite: an unusual complication. Ann Indian Acad Neurol. 2010;13:67–8.
- Malhotra P, Sharma N, Awasthi A, Vasishta RK. Fatal acute disseminated encephalomyelitis following treated snake bite in India. Emerg Med J. 2005;22:308–9.

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Sivasambo Kalpana drskalpana@yahoo.co.in

<sup>2</sup> Department of Neurology, Government Vellore Medical College, Adukamparai, Tamil Nadu, India

<sup>&</sup>lt;sup>1</sup> Department of Pediatric Medicine, Government Vellore Medical College, Adukamparai, Tamil Nadu, India