



## Case Study

### Snake Bite Presenting as Lock in Syndrome

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#### ABSTRACT

##### Keywords

Snake Bite,  
Lock in  
syndrome,  
Neurotoxic  
snake

A young patient is described who partly recovered in 20 days, from lock in syndrome after snake bite. Lock in syndrome usually result in quadriplegia and inability to speak in other wise cognitively intact individual. They are able to communicate by blinking of eye which is often not affected by the paralysis. Neurotoxic snake for example, krait attacks nocturnally and is very quick to bite people sleeping on the floor. The victim is often unaware, as bite is painless. This case suggested that snake bite should be suspected in unresponsive patient found early in the morning, in endemic area of snake bite, in monsoon season.

## Introduction

### Case report

An 18 year male was brought to the emergency room in unresponsive state, intubated and ventilated by Ambubag. At presentation, patient had no motor response to painful stimuli, there was ptosis in both eyes, no spontaneous eye movement, deep tendon reflex and planter reflex were absent, His respiratory effort was sluggish, patient was kept on ventilatory support.

According to the patient's attendant and the hospital record, he developed sudden onset of abdominal pain at 4:00 am, the pain was associated with vomiting, sensation of itching and weakness in limbs, blurring of vision, difficulty in deglutition followed by unconsciousness.

For these complaints patient was managed

as gastroenteritis at a hospital in Delhi, but symptoms were not relived. Thereafter his respiratory rate was decreasing. Patient was shifted to private hospital, where patient had to be intubated and mechanically ventilated. CBC, RFT, LFT, sodium, potassium, ABG, PT, INR, CT SCAN, ECG, X-RAY and ECHO were done.

All investigations were normal except  $\uparrow$  S. bilirubin 2.5mg/dl, PT, INR was 19.

During hospital course patient develop continuous seizures, and gone into cardiac arrest, CPR was done for 20 min and patient was revived.

The patient was managed on lines of seizure disorder with aspiration pneumonia but

patient left hospital. On third day the patient was intubated and connected to Ambubag.

Patient was kept at home for 12 hours and then brought to emergency section at J.N.M.C. Hospital and immediately shifted to ICU.

A thorough clinical evaluation was done, neurological examination revealed bilateral drooping of eyelids, which suggest that it could probably be case of neurotoxic snake bite. He was administered 10 vial of Polyvalent antsnake venom, diluted in 500ml of NS. Neostigamine 6 ampule (1ml contain 2.5 mg), and 2 amp atropine (1 ml contain 0.6 mg) in 500ml NS at rate of 1ml/hour for 3 days.

Next day patient started showing improvement, ptosis was improved and patient regained complete consciousness within two days. But his power in both lower limbs was grade 1 and in upper limb, power was grade 2. Within 15 days patient improved power was grade 4. Patient was shifted to medicine ward.

## Discussion

Lock in syndrome usually result in quadriplegia, inability to speak, in other wise cognitively intact individual. They are able to communicate by blinking their eyes, which are not affected by the paralysis (Bauer, 1979). It is rarely reported in snake bite (Prakash *et al.*, 2008).

Lock in syndrome in snake bite occurs due to neuromuscular transmission blockade. Krait is a neurotoxic snake. Krait neurotoxin acts pre synoptically, while Cobra neurotoxin acts postsynaptically (Warrell and International Panel of Experts, 1999). Few cases have been reported of lockin syndrome after snake bite. Irreversible

binding of toxin to presynaptically make clinical recovery slow in Krait bite as recovery occurs only with the formation of new neuromuscular junction as was seen in our case (Chul *et al.*, 2004).

Common neurological symptom after snake bite in decreasing order of frequency include ptosis (85.7%), ophthalmoplegia (75%), limb weakness (26.8%), respiratory failure (17.9%) (Kohli and Sreedhar, 2007). These are experienced within 6 hours of bite. Following administration of antsnake venom, the signs of recovery become evident. In our case patient develop abdominal pain with nausea and vomiting, he had taken meal outside previous night, so doctor diagnosed as a case of gastritis, and this lead to mismanagement of case. Incidence of complication is directly related to the duration of venom in the blood. The site of bite was undetectable in 17% of snake bite cases, in a prospective study. It is very challenging to make diagnosis of snake bite in patient presenting with abdominal pain and vomiting.

## Conclusion

It is concluded that, even without history or scratch mark of snake bite, case presented with sudden onset of neurological symptom such as weakness in limb, difficulty in respiration and drooping of eye lid. A possibility of snake bite should be considered especially in monsoon season in persons sleeping on the floor. Proper history, timely administration of ASV, ventilator support, saved the patient.

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