

Atypical Presentation and Successful Management of Snake Bite and Sharing of Experience of a Tertiary Care Hospital Delhi, India

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Abstract

Snake bite in Modern India contributes significantly to accidental deaths and is mainly considered as disease of rural regions. Existing literature suggests that snake bite is highly under reported and neglected because of various reasons especially in developing countries. We present a case of 20 year old male presented to our tertiary care hospital in Delhi, in unconscious state without any apparent signs of snake bite. After ruling out other causes and with our experience of treating snake bites we gave Anti Snake Venom and thereafter his condition improved dramatically. We also have shared our experience of treating snake bites in last few years.

Keywords: Snake Bite; Anti Snake Venom; Symptoms

Introduction

Snake bite deaths in modern India had contributed upto 5% i.e. 45,900 of all accidental deaths in 2005 [1,2]. The burden of this neglected and deadly disease was 1.2 million cases, 421,000 envenomings 20,000 deaths worldwide in 2008 [3]. In 2009 World Health Organization (WHO) included snake-bite in list of neglected disease. However, still it continued to be neglected by government organizations, general public and clinicians [1]. Underreporting by hospitals, treatment by village based traditional therapist, its strong association with poor population, high cost of polyvalent antivenom with need of intensive care are few of the reasons that why this timely treated disease of young people is not being properly addressed [2].

We report a case of successful management of young unconscious patient suspected to be snake-bite without any apparent signs and share our own experience of management of snake bite.

Case Report

A 20 year old male resident of north west Delhi, India was brought to our casualty in unconscious state in month of July. History revealed that he along with two others had dinner at night and slept on floor. When he got up in morning he complained of generalized weakness, difficulty in walking and pain during swallowing of water. There was no history of any addiction, seizures, headache, vomiting, fever and head injury. On general examination there was no sign of any external injury, bite mark, pallor, cyanosis, clubbing, edema or lymphadenopathy. Cardiopulmonary and abdominal examination was unremarkable.

On central nervous system examination Glasgow Coma Score (GCS) was 3, pupils were dilated and sluggishly reacting to light. All deep tendon reflexes were absent and power in all four limbs 0/5. Kernigs sign and neck rigidity were absent. Patient was afebrile, pulse rate 92/minute, blood pressure 110/70 mmHg, respiratory rate -7-8/minute, Oxygen saturation-90% on room air. Arterial blood gas on oxygen mask was pH-7.34, PaO₂ -60, PaCO₂ -46, HCO₃ -18, Base excess-2.

Patient intubated and put on mechanical ventilation, nasogastric tube inserted and urinary catheterization done.

Differential diagnosis of poisoning, snake bite, encephalitis and variant of Gullian Barre Syndrome, were considered. Complete blood count revealed neutrophilic leucocytosis (95% of 13.2×10^9 cells/l) and rest of the laboratory investigations were within normal limits including chest X Ray and electrocardiogram. CT scan of head and biochemical analysis of cerebrospinal fluid were normal.

Gastric lavage was done and send for chemical analysis. Since all other persons who had consumed same food were normal and on the basis of history of sleeping on floor during rainy season; polyvalent anti-snake venom (ASV) (Bharat serums and vaccines -cobra, common krait, Russels viper, Saw-scaled viper) 5 ampoules in 500 ml of normal saline given over a period of one hour. Neostigmine 0.5 mg, atropine 0.6 mg, hydrocortisone 200 mg and antibiotics were given intravenously along with other supportive treatment. ASV was given within 8 hours since he woke up from sleep. Within 30 minutes of ASV infusion, patient's conscious level started improving and the treatment was repeated 8 hourly. Next day patient weaned off from ventilator and extubated as bulbar palsy, respiratory failure, power in all four limbs and GCS improved, but ptosis persisted. Ptosis got completely resolved in 3 days. ASV continued upto day 3, on day 4 patient regained full power in all four limbs, was able to walk, ptosis completely resolved, and patient was shifted to ward on 5th day.

Discussion

India is abode of 60 species of venomous snake and four most abundant deadly venomous snakes are spectacled Cobra (*Naja naja*), Common Krait (*Bungarus caeruleus*), Saw-scaled Viper (*Echis cannatus*) and Russel Viper (*Daboia russelii*) [2].

Snake bites show classical seasonal variation, more common in summer and rainy season. Kraits are known to bite sleeping victims and bite mark may not be visible and is painless in many cases [4,5]. These are neurotoxic snakes and victims may die during sleep with abdominal pain, descending paralysis and respiratory failure.

Systemic absorption of venom causes neutrophilic leucocytosis and the only positive laboratory investigation in our patient was neutrophilic leucocytosis.

Million death study suggests possible underestimation of data of snakes bites in such cases as they may be missed out because of absence of apparent local signs of snake bite [2]. For management of snakebites WHO has published guidelines for South East Asian Region that ASV should be given within 4hours but can be given up to 24 hours of snake bite. It also suggests that sensitivity testing of ASV is not required and dose of ASV varies with degree of envenomations and need more trials. In case of neurotoxic envenomation neostigmine can be given as 50 - 100 µg/kg 4 hourly or as infusion along with or glycopyrrolate [6].

In our case patient does not had any fang marks and had not seen any snake as he was sleeping. Corroborating our experience of treating cases of snake-bite with background history of sleeping on floor during rainy season and after ruling out other causes of descending paralysis, respiratory failure, we gave ASV to the patient. After giving ASV, significant improvement was observed in patient.

Our hospital is a tertiary care hospital lies in the northwest part of Delhi and is surrounded by many poor colonies. Patients of snake-bite mainly present with neurological sign and symptoms. From January 2013 to July2016 majority of incidences took place during rainy season (Table 1). Age distribution of cases is shown in table 2.

Total number of patients	41
Recovered	37
Died	4
Male: Female	22:19
Average duration of stay	4 days

Table 1: Profile of Patients with Snake Bite (Jan 2013-July 2016).

Age in Years	Number
5 - 10	1
11 - 20	13
21 - 30	16
31 - 40	6
41 - 50	4
51 - 60	1

Table 2: Age distribution of patients with Snake Bite (Jan 2013 to July 2016).

All patients were kept in intensive care unit and approximately 1000 vials of ASV of government supply were used.

There is no data published till now on snake-bite from Delhi. This is a unique case which highlights the importance of history and clinical experience of the physicians in treating snake-bite without any definitive clues.

Conclusion

Snake-bite is common even in capital of India. If timely treated outcome can be good and many young lives can be saved. Proper reporting and awareness should be created at every level including policy makers, treating physicians and general public.

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