



A Case Report of Neurotoxic Snake Bite

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Abstract

Snake-bites are well-known medical emergencies in many parts of the world, especially in rural areas. Snake bites have neurotoxic, hemotoxic, myotoxic or mixed presentation .we present a case of neurotoxic snake bite presenting as difficulty in opening of eyes in the morning.

Introduction

Snake bite presents as a life threatening emergency in rural areas of countries like India with an incidence of 4.3 per 100,000 populations and mortality of 20%⁽¹⁾. Snakes were formerly classified as neurotoxic (cobra, kraits), haemotoxic (viper) and myotoxic (sea snakes)⁽²⁾. Acute neuromuscular paralysis is the main type of neurotoxicity and is an important cause of morbidity and mortality related to snakebite.⁽³⁾

Case Report

28 years male patient from mandi (H.P) presented with history of snake bite on right pinna (not seen) while sleeping at night and difficulty in opening eyes in the morning. At presentation there were no history of difficulty in breathing, weakness, difficulty in swallowing, pain or swelling, bleeding from any site, red coloured urine, decreased urine output, frothing from mouth, diplopia or blurring of vision, fever, headache and vomiting .His past history and family history was

not significant .On general physical examination patient was conscious, cooperative and well oriented to time, place and person. His vitals were blood pressure of 130/80 mm Hg, Pulse rate of 86/min, respiratory rate of 26/min and Spo2 of 98 % .No fang marks or local swelling was seen on examination. There ws no pallor, icterus, cyanosis, JVP not raised, pedal edema and lymphadenopathy. Examination of cardiovascular system and respiratory system was normal. on per abdomen examination was normal. Patient had bilateral ptosis, mydriasis and external ophthalmoplegia as shown in figure 1



Figure 1: Bilateral ptosis at time of presentation. Hematological investigation shows Hb of 15.1 g/dl, TLC – 9.27 thou/dl, DLC – P 78%, L 28%, M 2%, E 2%, PLT – 268 thou/dl and Peripheral smear was normocytic normochromic. LFT and RFT were normal. WBCT was less than 20 min, INR – 0.8 and Neostigmine challenge test was negative (no improvement with injection neostigmine). Diagnosis of Snakebite with systemic envenomation i.e neurotoxicity? Krait were made. Management include Vital charting, WBCT 6hrly, Inj tetanus toxoid 0.5 ml I/M, Inj ASV 100 ml NS over 1 hr and repeated on next day. After treatment ptosis and ophthalmoplegia was improved as shown in figure 2.



Figure 2 Improvement of bilateral ptosis after treatment

Discussion

Neurological manifestations are drowsiness, paraesthesiae, abnormalities of taste and smell, “heavy” eyelids, ptosis, external ophthalmoplegia, paralysis of facial muscles and other muscles innervated by the cranial nerves, nasal voice or aphonia, regurgitation through the nose, difficulty in swallowing secretions, respiratory and generalised flaccid paralysis. Studies have shown that the common neurological manifestations are ptosis (85.7%) followed by ophthalmoplegia (75%), limb weakness (26.8%), respiratory (17.9%) and palatal weakness (10.7%), neck

muscle weakness (7.1%), and delayed sensory neuropathy (1.8%)(4). Neurological weakness usually appears within hours. The interval between bite and neurological weakness may vary from 1 hour to 10 hours⁽⁴⁾. The majority of current first aid methods adopted by victims such as tourniquets, cutting and suction and herbal remedies are completely ineffective and dangerous. It is now recommended to adopt what has been called the ‘Do it R.I.G.H.T.’ approach, stressing the need for Reassurance, Immobilisation as per a fractured limb, Getting to Hospital without delay and Telling the doctor of any symptoms that develop. Antivenom treatment alone cannot be relied upon to save the life of a patient with bulbar and respiratory paralysis. Death may result from aspiration, airway obstruction or respiratory failure. A clear airway must be maintained. Once there is loss of gag reflex and pooling of secretions in the pharynx, failure of the cough reflex or respiratory distress, a cuffed endotracheal tube or laryngeal mask airway should be inserted. Polyvalent anti-snake venom is the cornerstone of the management of snakebites. As per WHO guidelines, anti-venom treatment is recommended if a patient with proven or suspected snakebite has developed one or more of the following signs: 1) Haemostatic abnormalities: spontaneous systemic bleeding (clinical), coagulopathy (20 whole blood clotting test or other laboratory tests such as prothrombin time) or thrombocytopenia (<100,000 /mm³) (laboratory) 2) Neurotoxic signs: ptosis, external ophthalmoplegia, paralysis etc Cardiovascular abnormalities: hypotension, shock, cardiac arrhythmia (clinical), and abnormal ECG(5). A proportion of patients, usually more than 10%, develop a reaction either early (within a few hours) or late (five days or more) after being given antivenom.

Conclusion

Neurotoxic snake bite usually present as ptosis and descending type of neuromuscular paralysis. Snake bite such as krait can be painless and

without any local inflammatory sign . Early diagnosis and prompt treatment can reduce mortality and morbidity.

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