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Monsoon months: Think about snake bite !

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ABSTRACT

Snake bite is an acute life threatening emergency with atypical presentation in pediatric age group. Fatal snakebites are a bigger than acknowledged global health problem that has been vastly underreported. Here we have reported three cases of snakebite, in which the patient didn't, reported of snake bite and presentation wise it was like dengue shock syndrome. Diagnosis of snake bite is challenge in monsoon season due to diagnostic dilemma with dengue syndrome. Management is lifesaving in such cases.

Keywords: Snake bite, Monsoon season, Dengue

Introduction

Snake bite is an acute life threatening emergency with atypical presentation in pediatric age group. Fatal snakebites are a bigger than acknowledged global health problem that has been vastly underreported. The World Health Organization estimates that up to 5 million people suffer from snakebite each year resulting in 300,000 cases of permanent disability and about 100,000 deaths .In India, 35000-50000 lives are lost per year due to venomous snake bite [1]. Here we are reporting three cases of snakebite, where the patient did not reported of it and presentation wise it was like dengue shock syndrome with its complication. All patients reported during monsoon months when cases of dengue fever and dengue like diseases were at peak.

Case reports

A 5 year old boy with query (?) dengue encephalopathy

This boy had history of fever, cold and cough since 2 days. Shown to pediatrician and it was diagnosed as viral fever and patient sent back to home. Next day morning patient woke up with pain in abdomen, feeling unwell and having cough. Patient revisited same pediatrician who investigated with CBC, SGPT and Chest X-ray.

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Reports were noncontributory except borderline low platelets (count 1.47 lakh) pediatrician diagnosed his as Dengue like disease and admitted to pediatric ward. In afternoon had convulsions and altered sensorium. CSF examination was done and that was normal. As patient's condition kept on deteriorating, he was referred to ICU in private (Ozone Hospital) with diagnosis of Dengue fever with encephalopathy. On admission patient had weak respiratory effort, dilated pupils, absent gag, absent reflexes and altered sensorium. Patient was intubated and put on ventilation. There were no signs suggestive of dengue fever like edema, rash or hepatomegaly. But also patient gives no history of any bite. Presumptive diagnosis of krait bite was considered and patient given 10 vials of ASV .By the 24 hours he started moving his limbs, there was recovery of neck flexion and stable recovery of respiration. By the 48 hrs, patient was weaned off ventilator and discharged after 7 days. No neurological sequele remains on follow up.

1.5 year old boy with query (?) Status Epilepticus

This child was playing outside the home in the morning. He came home crying inconsolably. In an hour had three episodes of generalised tonic-clonic convulsions and became unconscious. Patient was referred to Ozone Hospital, Akola as a case of Status Epilepticus. On admission patient was having limp, pupils dilated, absent gag and weak respiratory efforts.

After excluding other medical conditions with high suspicion of krait bite patient was treated with anti snake venom and mechanical ventilation. Patient had no further convulsions. Respiration improved within 24 hours and he was discharged after 5 days without any neurological sequele.

11 year old boy with (query) dengue shock syndrome with respiratory distress

11 year old boy got up in morning complaining of abdominal pain, mild fever and not feeling well .he was shown to general practitioner and sent home on some oral medications. Again visited same doctor in afternoon with difficulty in breathing who immediately referred him suspecting dengue shock syndrome with respiratory distress. Patient presented to emergency department of Government Medical College, Akola with bilateral ptosis, salivation and poor respiratory effort. On the clinical signs and symptoms patient was suspected snake bite, and he was treated with 150 ml (15 vials) of ASV and mechanical ventilation. Respiration stabilised within 12 hours and patient was off ventilator within a day. Later he confessed of something being bitten on his right forefinger in the night. He was sleeping on floor. However bite mark was not visible.In all three patients symptomatic treated with antibiotics, Tetanus Toxoid and adequate hydration as required. Patients were investigated with complete blood count, renal function tests, electrolytes, urine for hematuria, bleeding and clotting time and chest radiograph. All patients were normal till one month follow up.

Discussion

Indian snake krait bite can put medical professionals in a fix as patients do not feel the bite and there are little or no local signs. Krait is the most poisonous of all species of snakes seen in India. They are mostly active during night hours. Found in the vicinity of human habitation, majority of cases are bitten between 11 pm to 5 am [2].Sudden vomiting, giddiness and pain in abdomen occur within 10-30 minutes of bite wrongly attributed to indigestion. Usually these symptoms are neglected and the victim goes to sleep and subsequently the venom is absorbed into the circulation. Krait venom is rich in beta bungarotoxin and irreversibly blocks the presynaptic acetylcholine receptors .In Indian krait the venom has properties to block both pre and postsynaptic acetylcholine receptors [2,3]. Few cases develop quadriplegia with total opthalmoplegia and dilated pupils (Locked-in syndrome). The clinician may feel the patient is brain dead or comatose, but such victims recover totally within 3-4 days if treated properly by maintaining oxygen saturation with proper ventilator support. This phenomenon is due to blocked postsynaptic acetylcholine receptors including the sphincter pupillary muscle which are rich in acetylcholine receptors [4, 5].100 ml (10 vials) of ASV diluted in 200 ml of normal saline is to be given by intravenous route over 30-50 minutes. 50 ml of ASV is repeated if there is no improvement in neuroparalysis. Administration of ASV by bolus should be avoided as it may rapidly activate the complement system and can cause severe anaphylaxis. 25 micrograms/kg neostigmine is given by intravenous route and then 50 micrograms/kg over next 4 hours can be repeated as per recovery. Atropine must be given just to counteract the muscarinic action of neostigmine (salivation and secretion) [2, 3].High incidence of krait bite reported during monsoon and post monsoon months. During these months dengue fever and dengue like diseases are also at his peak. The seasonal pattern of dengue outbreaks coincides with rainy season. Over last 10-15 years incidence of dengue has increased many fold. It has now become the leading cause of hospitalisation and death among children in the South-East Asia Region of WHO, following diarrheal diseases and acute respiratory infections [6].

Conclusion

Undiagnosed snake bite victims are erroneously labeled as dengue shock syndrome with ARDS and /or encephalopathy. This happened in 2 of our patients as they presented during rainy season. Absence of swelling, rash, hepatomegaly and normal blood picture should prompt the clinician to look for alternative diagnosis. Thus a person reporting in midnight or early morning with history that he woke from floor bed due to pain in abdomen with or without history of bite and bulbar palsy should be diagnosed as krait bite until proved otherwise [2].This will help in preventing the unnecessary tragedy of death from snake bite.

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