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NEOSTIGMINE AS A USEFUL ALTERNATIVE TO COBRA ANTIVENOM IN A COBRA BITE PATIENT PRESENTING WITH MYASTHENIC SYNDROME IN A RESOURCE-LIMITED SETTING

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Abstract:

A case of a snake bite incident is presented (most likely cobra, *Naja samarensis*, based on description and stock photo identification) of a 42-year-old female who developed respiratory distress, ptosis, upper lip and jaw numbness, incomplete tongue protrusion, difficulty swallowing, slurring of speech, dizziness, headache, nausea, vomiting, diplopia and blurring of vision, body weakness, and pain at the bite site. Hematoma formation was noted at the bite site, 5th digit of the right foot.

The patient was given only 1 ampule of monovalent cobra anti-venom due to scarcity, together with intravenous (IV) neostigmine (25mcg/kg bolus) following atropine 0.6mg IV. There was alleviation of ptosis, diplopia, jaw numbness, difficulty swallowing, and slurring of speech (collectively known as Myasthenic Syndrome) but was observed to recur after four (4) hours from the administration of medications mentioned. Another dose of neostigmine IV bolus was administered, and symptoms were again alleviated for 4 hours. Since myasthenic syndrome recurred after 4 hours from administration of neostigmine IV bolus, a neostigmine (100mcg/kg) IV infusion for 8-hours was initiated with atropine 0.6mg IV on stand-by for signs of cholinergic excess. The treatment regimen of neostigmine IV drip with a maximum dose of 12mg per day at an interval of 6 to 8 hours, was given to the patient until the resolution of symptoms which was observed after ten (10) days of hospitalization. No adverse events were noted during the administration of the alternative treatment.

On the 11th to 12th hospital day there was no recurrence of myasthenic symptoms for 48 hours, thus, the patient was discharged with continuation of antibiotics for the cellulitis of the bite site.

Aim and objectives:

To present the first ever recorded case of cobra bite (*Naja naja samarensis*) with myasthenic syndrome, successfully treated with neostigmine-atropine regimen in a resource limited setting.

Methodology: Case report



Results:

Successful treatment of a 42 year old female who was bitten by a cobra on the 5th digit of the right foot and developed a myasthenic syndrome was achieved after using neostigmine-atropine regimen for 10 days.

Conclusions:

This is the first case of cobra envenomation in our institution that presented with prolonged myasthenic syndrome. Administration of neostigmine-atropine regimen can be a life-saving measure for the patient with cobra bite having signs of neurologic envenoming. Since there is scarcity of cobra antivenom in the country, this regimen must be readily available to non-urban areas where incidents of cobra bites are common.