Chorea following Cobra bite - A case report

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Abstract:
Anti-Snake Venom (ASV) administration may cause immune complex mediated CNS demyelination. So far a few cases of optic neuritis following ASV administration and a case of Guillan Barre Syndrome following ASV administration have been reported in India. Movement disorder or psychiatric disturbance may be a rare presentation of Acute Disseminated Encephalomyelitis (ADEM). We present a 14 year old boy who developed chorea and weakness after administration of ASV due to ADEM.

Keyword: ASV (Anti Snake Venom) CNS demyelination chorea ADEM (Acute Disseminated Encephalomyelitis)

Introduction:
ASV (Anti Snake Venom) related demyelination has been rarely reported in the literature. We present a 14 year old boy who developed chorea and weakness after administration of ASV following cobra bite.

Case report:
A 14 year old boy was brought to the casualty with history of snake bite (Cobra) two hours back. He was given tetanus toxoid and transferred to the Intensive care unit. Immediately after shifting to the ICU patient developed cardiac arrest. CPR was started; patient revived and put on ventilator. Local examination revealed fang marks in the left foot, without any local cellulitis or excessive bleeding. Whole blood clotting time was normal. ASV (8 vials) was started after a test dose. Patient regained consciousness after 4 hours and was successfully weaned from ventilator over the next 6 hours. The general condition improved and the patient became ambulant the third day. He was transferred to the medical ward. On the fifth day morning patient woke up with weakness of his right upper and lower limb. There was no obvious facial weakness or sensory disturbance. The power was 3/5 in the upper limb and 2/5 in the lower limb. Plantar was extensor on the right side and reflexes were brisk in the right side. He had generalised seizures lasting for 2-3 minutes during sleep.
The initial CT scan of the brain was normal. The next day patient developed choreiform moments of the extremities. CSF analysis was normal. MRI brain with spinal cord was ordered which didn’t reveal any abnormality. Patient was started on inj Methylprednisolone IV and the weakness gradually improved over the next three days and the abnormal movements also disappeared over 7 days. MRI was repeated after 1 week. T2 hyper-intensities were noted in the basal ganglia. Oral steroids were tapered over the next 3 months and now the patient is totally asymptomatic after a follow up of six months.

**Final diagnosis:**
Acute Demyelinating Encephalomyelitis – ADEM presenting as chorea, following ASV administration.

**Discussion:**
It’s a rare case of CNS demyelination (ADEM-acute disseminated encephalomyelitis) following ASV administration, presenting as Chorea. ADEM develops 2-20 days following viral infections like EBV, HSV, CMV and also Mycoplasma infections. It can also occur following immunization for
Rabies and Measles.\textsuperscript{[3]} It is possibly mediated by autoimmunity involving T cell following viral infections or immunization mentioned above. Clinical features include abrupt onset irritability, lethargy, convulsions, psychiatric disturbances, motor weakness ranging from monoparesis to double hemiplegia and involuntary movements. Imaging finding usually lag behind the clinical symptoms.\textsuperscript{[4]}

MRI findings include T2 weighted high intensity signal lesions in junction of deep cortical grey and sub cortical white matter,\textsuperscript{[5]} Basal ganglia, Thalamus, Cerebellum and Spinal cord. Treatment is by administration of high dose corticosteroids. Intravenous Immunoglobulin is an alternative.

REFERENCES:


