Atypical Systemic Manifestation of Scorpion Envenomation

Sir,

Scorpion bite is common in rural areas of India with self limiting local reaction and pain at envenomation site, however envenomation due to Mesobuthus tamlus (Indian red scorpion) some time have uncommon systemic manifestation like myocarditis, pulmonary edema, pancreatitis, defibrination syndrome, DIC and CNS manifestation due to hemorrhagic infarct, all these systemic manifestation is corroborated to systemic effect of venom over autonomic nervous system and adrenal gland with release of neurotransmitter. We report a case of severe diffuse headache due to multiple intracranial parenchymal hemorrhage following a scorpion bite.

Mr. K, 18 yr male presented with acute onset severe diffuse nonpulsatile headache 10 hr after a scorpion envenomation over left hand, he had swelling and pain at the site of bite. There was no history of diplopia, convulsion, weakness over any of limbs, bulbar symptoms, neck pain, vomiting, purpuric rash, cough, breathlessness or pain abdomen. On examination patient was afebrile, pulse was 86/min, BP 128/74 without postural drop, there was swelling over left hand without serosanginous discharge, CNS examination revealed patient was oriented to time place, person with normal cranial nerves, fundus, sensory, cerebellar examination, motor examination revealed bilateral extensor planters, neck rigidity and kening sign was absent. On investigation routine hematological parameter, platelet count, coagulation profile was normal, FDP D-dimer test was negative urine routine microscopy was normal. CT scan of cranium showed parenchymal hemorrhage in frontoparietal and high parietal area. Radiological opinion favored AV malformation and patient was subjected to magnetic resonance angiography after one week, which did not show ny abnormality. Patient was managed with IV mannitol, steroid, dextrose insulin infusion on first day and IV mannitol, steroid for next five consecutive days. He showed mark improvement in headache and planters become flexor in OPD follow after one month.

In India most of scorpion envenomations do not cause systemic manifestation. Envenomation due to Mesobuthus tamlus mainly in border area of Maharashtra and Madhya Pradesh. It causes endothelial leak syndrome and systemic manifestation due to stimulatory effect of venom over autonomic nervous system and adrenal gland causing excessive neurotransmitter (adrenaline) release manifesting as pulmonary edema, myocarditis, pancreatitis, defibrination syndrome and neurological deficit due to infarct or hemorrhagic infarct following activation of coagulation and fibrinolytic pathway leading to deposition of small fibrin thrombi. In our case FDP D-dimer test was negative and magnetic resonance angiogram was normal, parenchymal hemorrhage could be due to transient rise in blood pressure due to release of neurotransmitter as we find in cerebral bleed following cocaine intake which cause sudden severe hypertension persisting for mean period of 40 minute. Mechanism being the cocaine blocks the transporter that recover dopamine from the synapse and it also block both nor epinephrine and serotonin reuptake leading to excess of adrenergic neurotransmitter. The aim of this documentation is rarity of cerebral hemorrhage following scorpion bite.

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References