

Images in clinical medicine



Snake bite-induced leukoencephalopathy

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Snake bite-induced leukoencephalopathy

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Image in medicine

A 15-year-old girl was brought to the casualty with an alleged history of snake bite on the ring finger of her right hand (A), which showed digital ischemia. The patient was unresponsive with severe respiratory distress. Patient management was done through elective intubation, cardiopulmonary resuscitation with lifesaving emergency medications were given, followed by anti snake venom. Finger reconstructive plastic surgery was performed after the patient became stable. Due to the neurotoxic effect on CNS, Magnetic resonance imaging (MRI) of the brain, the T2 and FLAIR sequences (B) showed symmetrical hyperintensities in the bilateral caudate nucleus and lentiform nucleus. Diffusion-weighted imaging (C) shows cortical rim of restriction in bilateral subcortical white matter and

corpus callosum and corresponding low signal intensity on A.D.C. There was no associated haemorrhage. Neurological signs and symptoms after a venomous snake bite are most often related to venom's toxic effects, which are anticoagulant/procoagulant activity or neurotoxicity. Some patients develop neurological complications related to cerebral hypoxia, which are related to hypotensive shock that may

accompany some snake bite envenomation. Neuromuscular disorders, that is, damage to the peripheral nervous system, occur most often after the bite of elapids but may also occur following a viper bite. The effect of neurotoxins may start from minutes to a few hours after the inoculation of venom, causing weakness related to a blockage of synaptic transmission at either presynaptic or postsynaptic levels.

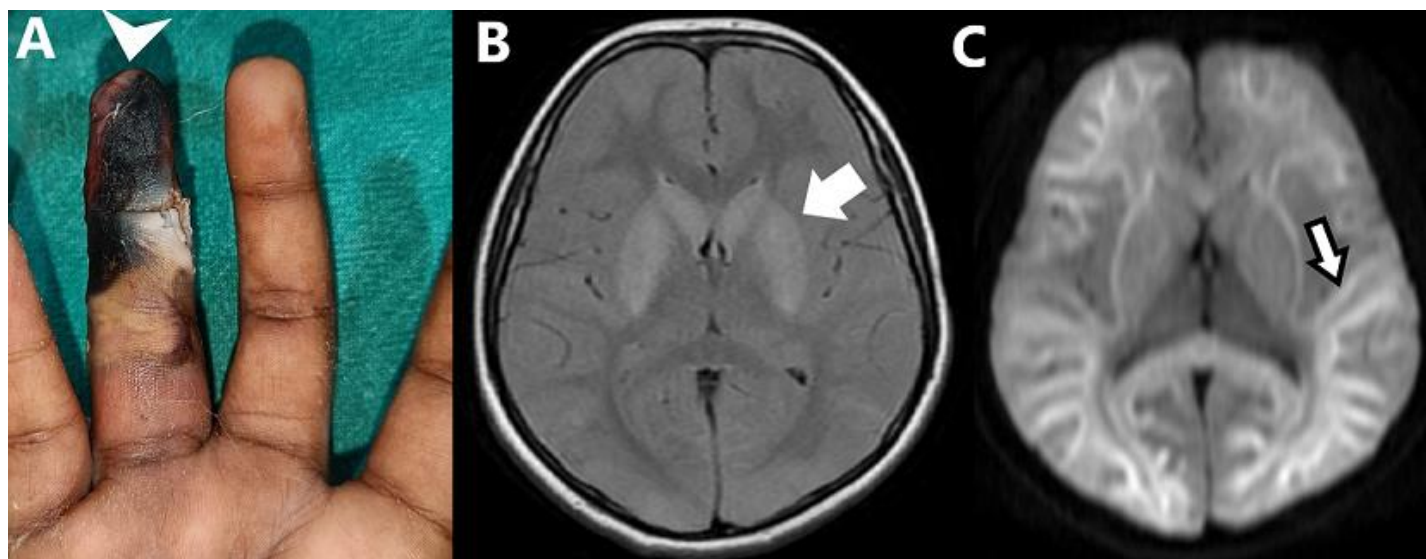


Figure 1: A) right hand showing digital ischemia of ring finger at the site of snake bite (arrowhead); B) MRI brain T2 sequence showing bilateral symmetrical hyperintensities in caudate nucleus and lentiform nucleus (white arrow); C) MRI brain diffusion imaging showing cortical rim of restriction in bilateral subcortical white matter and caudate nucleus (black arrow)