

Severe venom-induced-consumption-coagulopathy and compartment syndrome following saw-scaled viper envenomization: a case report

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Venom-induced coagulopathy is a well-recognized and common complication of viper snakes envenomation. Few cases are reported from the Middle East region, where the Echis species is a particularly problematic genus of the Viperidae family, with untreated envenomations carrying an estimated 20% mortality rate. The presence of destructive enzymes in the snake venom enables them to produce their local tissue damage effects, which manifest as localized edema that can, in rare cases, progress into limb-threatening compartment syndrome.

Here we present the case of a 34-year-old man who experienced a saw-scaled viper snake bite to his right index finger. In a matter of a few hours, the patient developed rapidly progressive pain and swelling that extended to his forearm despite receiving Saudi polyvalent anti-venom at a rural facility. Shortly after the patient attended a tertiary center, where not only his swelling was increasing to involve the arm, but his coagulation profile, which was initially normal, was found to be deranged, showing a picture of severe venom-induced consumption coagulopathy. He then received another dose of the anti-venom before undergoing upper limb fasciotomy for compartment syndrome, as the patient was experiencing intractable pain despite analgesia. His parameters improved after receiving a third dose of the anti-venom, and he went on to have skin closure done with grafting and was discharged in a stable condition within 1 week.

This case underscores the importance of vigilant monitoring for compartment syndrome and coagulopathy, as well as the repeated anti-venom dosing and timely surgical intervention in refractory cases. Early recognition and aggressive management can lead to favorable outcomes, as demonstrated by the patient's recovery following multidisciplinary care.

Keywords: Echis envenomations, compartment syndrome, venom-induced consumption coagulopathy, VICC, saw scaled viper.