

Bilateral Parotid Enlargement Following Hematotoxic Snake Bite: A Unusual Sequelae of the Venomous Sting

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INTRODUCTION

Snake bite is a neglected tropical disease of global importance. India has the highest number of deaths (35,000-50,000 people dying per year) due to snake-bites.¹ Common venomous snakes in India are common cobra (*Naja naja*), saw scaled viper (*Echiscarinatus*), Russell's viper (*Daboia russelii*) and krait (*Bungarus caeruleus*). Daboia is one of the most common species responsible for causing the most snake bite incidents and deaths among all venomous snakes on account of many factors, such as their wide distribution, aggressive response to host, and frequent occurrence in dense populated areas. Development of parotid swelling after snake bite is a rare entity. The number of case reports from India documenting such as unusual complication were very few. The published data documenting parotid enlargement even in world literature are limited.² So we are reporting a case with bilateral parotid gland enlargement following snake envenomation for its rarity.

CASE REPORT

A 35 year old female was admitted in our hospital 6 hours following a viper bite (*Daboia russelii*) on the ventral aspect of her left upper limb 2 cm above the elbow joint while she was cleaning her house. She was given ten vials of anti-snake venom (ASV) at a local hospital and was referred to our hospital for further management. The site of bite showed two fang marks with clotted blood over it. The surrounding area was bluish red in colour. She complained of pain in the left upper limb following which she developed edema and bluish red discoloration of skin over the left arm. (Figure 1b).

Lab investigations showed Hb: 11.5 g/dL; TC: 16000/cmm with neutrophilia (90%); Platelets: 95000/cmm. The whole blood clotting time (WBCT) was more than 20 min. Serum urea and creatinine were 110 g/L and 1.8 g/L respectively. Microscopic examination of the urine showed plenty of RBCs. Her liver function tests were normal and bleeding time (BT), prothrombin time (PT) and APTT were normal at the time of admission. She was treated with ASV, Inj. tetanus toxoid and was started on IV antibiotics.

She then developed swelling in both sides of the face 16 hours after admission (Figure 1a). The swelling was acute in onset and was painless. There was blu-

ish red discoloration in left side of the face. USG of parotid region showed enlargement of parotid gland with left side measuring 57 mm x 44 mm and right side measuring 55x42 mm [L>R] (Figure 2). Other salivary glands were not enlarged. There was no enlargement of any cervical group lymph nodes. Lab investigations showed mildly deranged liver function test with slightly prolonged SGOT and SGPT. WBCT was more than 20 min even after 12 hour of admission. BT, PT and APTT were mildly prolonged. ASV was readministered. Injection vitamin K and Fresh frozen plasma were given.

Patient was kept on continuous monitoring and all parameters were frequently rechecked and the patient was gradually improving and she was discharged on 8th post admission day.

DISCUSSION

Snake bite is one of the important cause of accidental death in rural india. The clinical features of viper bite may vary from minor local symptoms to life threatening systemic manifestations. Envenoming due to viper bites results in tissue damage, characterized by swelling and blistering at the bite site. Viper venom can also induce coagulopathy.

A study conducted by Monteiro *et al.* from Southern India showed that local signs of envenomation was present in 96% cases of viper bite, while systemic signs of envenomation was present in 90% of cases.³

Other than these usual clinical features, following snake bite patients may present with unusual complications such as hypopituitarism, encephalopathy, cerebral infarct, optic neuritis and myocardial infarction may occur.⁴ Bilateral parotid swelling is an unusual clinical feature of viper bite. A similar case of bilateral parotid swelling after Russel viper bite was reported by Chakraborty *et al* and Deepak *et al.*^{2,5} Their patient developed parotid swelling about 8 hours and 6 hours after snake bite respectively.

Exact cause of parotid enlargement after snake bite is unknown. But this unusual manifestation has been documented in the Indian National Snakebite Protocol 2007. More studies need to be done to determine the exact pathogenesis of parotid enlargement following snake bite.

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Figure 1(a): Arrow showing left side parotid gland enlargement with bluish red discoloration of overlying skin. **Figure 1(b):** Arrow showing site of bite

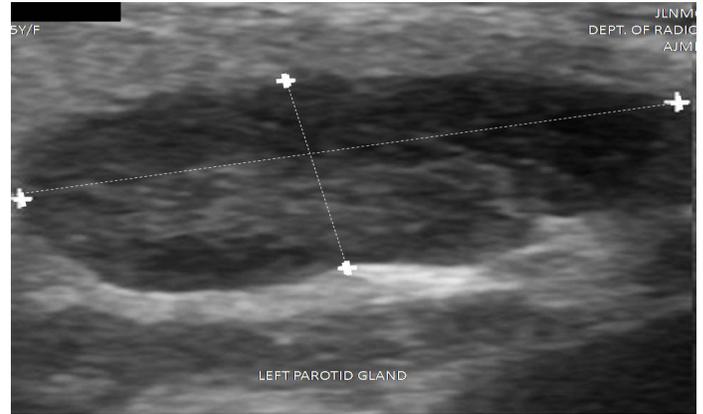


Figure 2 : Showing USG of the patient with left parotid gland enlargement with homogeneous to slightly hyperechoic echogenicity

CONCLUSION

Bilateral parotid enlargement after snake bite is a rare entity and these rare presentations of some dangerous envenomation may give vital clue about the underlying complications and organ involvement and help to sense the prognosis of the patient.

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CONFLICT OF INTEREST

There is no conflict of interest

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