

CASE REPORT



OPEN ACCESS

Received: 25.11.2022

Accepted: 25.12.2022

Published: 29.12.2022

Citation: Prasad NM, Kauser MM, Kumar SRV, Prashanth G. (2022). Intracranial Haemorrhage — A Life Threatening Consequence of Venom Induced Consumption Coagulopathy in Snake Bite: A Rare Case Report. International Journal of Preclinical & Clinical Research. 3(4): 97-100. <https://doi.org/10.51131/IJPCCR/v3i4.22.46>

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Funding: None

Competing Interests: None

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Published By Basaveshwara Medical College & Hospital, Chitradurga, Karnataka

ISSN

Print: XXXX-XXXX

Electronic: 2583-0104

Intracranial Haemorrhage — A Life Threatening Consequence of Venom Induced Consumption Coagulopathy in Snake Bite: A Rare Case Report

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Abstract

Snake bite envenomation is an acute life-threatening medical emergency. India which is called as the land of snake charmers has an incidence of 1.2 million deaths due to snake bite from 2009 to 2019 with an average mortality of 58,000⁽¹⁾. Ophitoxaemia rarely results in neurological conditions such as an Intracerebral Hemorrhage (ICH) which occurs with venom induced consumptive coagulopathy. We discuss the case report of a 52-year-old man with H/O an unknown snake bite who developed Acute Subarachnoid Hemorrhage (SAH) and multiple micro hemorrhages in B/L cerebral hemispheres.

Keywords: Intracranial haemorrhage; Snake bite; Venom induced coagulopathy

Case Report

A 52-year-old male patient presented to the emergency with an A/H/O unknown snake bite on his left foot at around 2:30pm near his house.

The patient was brought to the emergency after 7 hours post the bite. He was conscious, oriented and communicative. There were signs of local envenomation such as tenderness, swelling at the bite site up until the ankle. The patient was able to move all 4 limbs and pupils were BERL.

ON examination of vitals, the patient had SBP of 76mmHg, DBP was not recordable, pulse rate of 130bpm with SpO₂ of 96% @RA. The patient was immediately given bolus of 2-pint IV Fluids post which the patient's BP was

100/60mmHg. After an abnormal 20-minute whole blood clotting test, Anti Snake Venom (ASV) 100ml and supportive treatment was initiated as per standard protocol.

Blood investigations revealed thrombocytopenia with elevated Prothrombin Time/ International Normalized Ratio (PT/INR). Elevated levels of total and indirect bilirubin along with raised Lactate dehydrogenase levels were suggestive of hemolytic anemia. The patient had deranged serum creatinine levels indicative of AKI along with elevated CPK total. ECG showed T wave inversions in V3, V4, V5, V6, II leads and Highly sensitive Troponin T test showed elevated values.

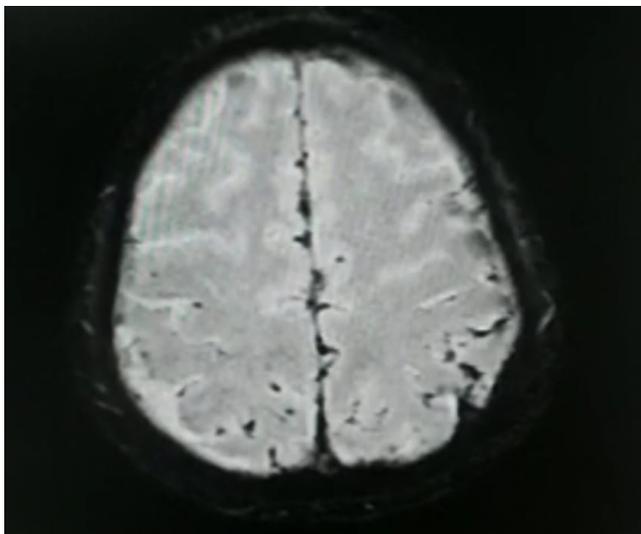


Fig 2. Multiple Intraventricular

The bite site swelling was gradually increasing, and the patient was diagnosed to have left lower limb cellulitis. Two days post his admission, the patient complained of weakness of his left upper limb with MRC power scale Grade 4/5. MRI brain scan was done which showed Acute Subarachnoid Hemorrhage (SAH) in B/L parieto-occipital lobe and left temporal lobe with multiple intraventricular micro hemorrhages extending along with B/L cerebral hemispheres.

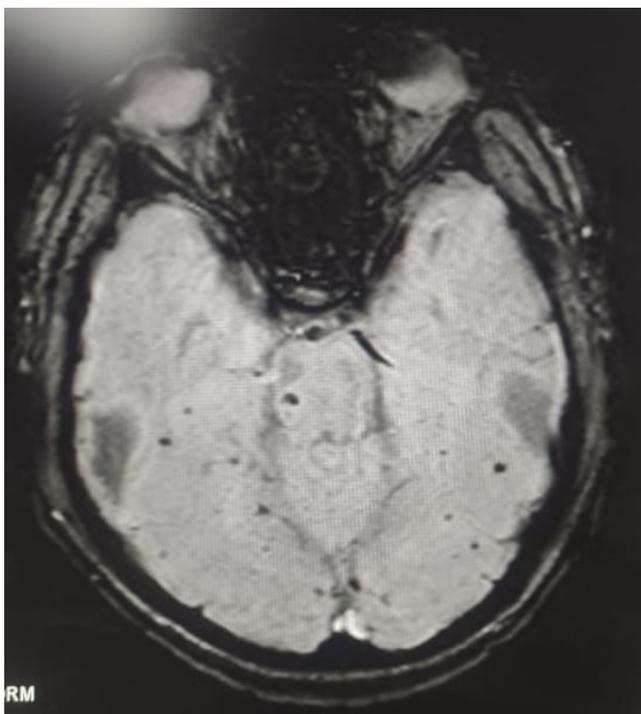


Fig 1. Acute Subarachnoid Hemorrhage (SAH) Micro Hemorrhages

Intravenous mannitol along with Antiepileptic Drug (AED) was immediately administered to the patient and neurosurgery consultation was sought, who advised for conservative management. Meanwhile, the edema from the left foot had extended all the way to the mid-thigh and an emergency surgery consultation was sought who opined it was left lower limb cellulitis with compartment syndrome and advised for an emergency fasciotomy to be done.

The Emergency fasciotomy under local anesthesia was carried out and the patient was transfused with 1 pint Packed Red Blood Cells (PRBC) and fresh frozen plasma (FFP).

Necessary dressing and IV antibiotics were given over the next couple of days and the patient's condition improved steadily post which he was discharged.

Discussion

Snake bite envenomation resulting in neurological complications such as intracerebral hemorrhage (ICH) and infarcts are rare and more often than not they are infrequently documented.

The most common coagulopathy associated with snake-bite envenoming is Venom Induced Consumptive Coagulopathy (VICC)⁽²⁾. The other etiopathogenesis include endothelial damage, immune-mediated vasculitis and systemic hypotension⁽³⁾.

The delayed appearance for Intracerebral Hemorrhage (ICH) must be because of delayed seepage of venom from deeper reservoirs in the bite site or due to disassembly of antigen antibody complex resulting in circulation of the now unbound venom constituents. This probably could be the reason for the delayed appearance of Intracerebral Hemorrhage (ICH) as quoted by Kularatne SAM et al.,⁽⁴⁾ and Kumar N et al.,⁽⁵⁾.

Only 1% of the patients with coagulopathy in snake bite develop Intracerebral Hemorrhage (ICH)⁽⁶⁾.

Conclusion

Intracerebral Hemorrhage (ICH) due to ophitoxaemia is a potentially fatal complication and from treatment with Anti Snake Venom (ASV), timely surgery if indicated and supportive treatment with Fresh Frozen Plasma (FFP) and blood products can improve patient's outcome.

Table 1. Evaluation parameters

Test Name	17-11-2021 10:02 PM	18-11-2021 09:43 AM	18-11-2021 06:14 PM	19-11-2021 12:00 AM	20-11-2021 12:00 AM	21-11-2021 12:00 AM	22-11-2021 12:00 AM	24-11-2021 12:00 AM	26-11-2021 12:00 AM	27-11-2021 12:00 AM	28-11-2021 12:00 AM	30-11-2021 12:00 AM	02-12-2021 12:00 AM
BIOCHEMISTRY													
RENAL FUNCTION TEST 1													
SERUM URIC ACID	5.7	-	-	-	-	-	-	-	-	-	32	2.4	-
BLOOD UREA	40	54	69	80	68	39	-	-	40	-	32	23	25
SERUM CREATININE	1.5	2.2	2.6	2.2	1.7	1.2	-	-	0.7	-	2.2	0.6	0.7
CBC													
HB (HEMOGLOBIN)	10.0	-	-	7.2	9.0	9.0	8.9	9.5	10.1	-	9.4	-	9.0
PLATELET COUNT	1.15	-	-	1.3	1.03	1.08	1.08	2.04	2.95	-	3.88	-	7.34
TC (WBC COUNT)	28610	-	-	17230	17,400	13200	13,800	15,290	31,820	-	28,030	-	10700
PT INR (PROTHROBIN TIME)													
P. Time	-	25.7	-	14.0	12.5	-	-	-	-	-	-	-	-
Control	-	11.3	-	13.5	12.5	-	-	-	-	-	-	-	-
INR	-	2.27	-	1.2	1.0	-	-	-	-	-	-	-	-

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