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Renal Failure and Subarachnoid Hemorrhage, A Rare Complication after Echis Carinatus Bite: from Southern Iran. Report of a Case

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Abstract
Subarachnoid hemorrhage is a rare complication after snake bite. Herein, we report A 63 year old lady with generalized tonic colonic convulsion due to Subarachnoid hemorrhage after Echis Carinatus bite.

Key words: **Snake Bite; Subarachnoid Hemorrhage; Echis Carinatus**

1. Introduction

Venomous animal bites are a significant health problem for rural populations in many parts of the world.(1) Subarachnoid hemorrhage is a rare complication.(2)

Herein, we report an unusual presentation of Echis Carinatus bite from southern Iran.

2. Case presentation

The patient was a 63-year-old diabetic lady who referred to Shiraz Nemaze hospital due to generalized tonic clonic convulsion and decreased level of consciousness after snake bite by Echis Carinatus at the left lower extremity. The patient was completely well till 5 days before admission after she was bitten by a snake and developed a local erythematic lesion and pain. Accordingly the patient received anti venom

in the local hospital. She was relatively well until 3 days after the bite when she developed 2 episodes of generalized tonic clonic convulsion. Blood sugars during the episodes of convulsion were within normal ranges (on the base of transfer note from the local hospital). Moreover, she developed headache, decreased level of consciousness and hypertension.

On admission, the patient was confused and blood pressure was 240/110mmHg.

In routine the laboratory investigations, hematuria was detected in the urine analysis.

The patient was anemic (Hb on admission: 7.8mg/dl, MCV: 75) with severe uremia (BUN on admission: 131 and Creatinine on Admission: 10.1mg/dl). Electrocardiography was normal. Moreover, some haemostatic disturbances were detected too. (PT: 18/13, PTT: 60, INR: 1.4)

In para clinical imaging, brain CT scan demonstrated multiple small intracranial hemorrhage and also subarachnoid hemorrhage in the subcortical white matter of the right parieto -occipital junction. She received 5 bags of packed cell for correction of anemia, and due to severe uremia dialysis was performed 10 times.

The patient was observed, and received analgesic for management of pain, anti convulsants due to 2 episodes of convulsion at the ward and anti hypertensive drugs, moreover 10 episodes of dialysis was performed for her.

After 15 days, the patient was discharged from the ward in a good general condition. Brain CT scan for follow up showed a decrease in the size of sub arachnoid hemorrhage. Anemia was revealed (Hb on discharge day: 12.3), but she had developed renal failure. Lab data of the patient on admission and discharge is shown in Table 1.

3. Discussion

Envenoming due to snake bite can cause two important effects : local effects; notably tissue necrosis, systemic effects, including paralysis, haemostatic disturbances, rhabdomyolysis , acute renal failure (ARF) and disseminated intravascular coagulation. (DIC).(3) Subarachnoid hemorrhage is a rare complication after snake bite. Some cases of fatal cerebral hemorrhage after snake bite were reported in the literature.(4)

In these cases, the most important cause of the cerebral hemorrhage was the haemostatic disturbances and coagulopathy disorder .Hypertension due to acute renal failure which may add to coagulopathy after snake bite aggravated the condition.(5)

In our patient, acute renal failure after snake bite caused an acute onset hypertension, which can cause cerebral hemorrhage. On the other hand, haemostatic disturbances due to the snake bite contributed to this situation.

In these cases early diagnosis and treatment of fatal conditions is very critical.

Clinical and laboratory characteristics which suggest both renal failure and haemostatic disturbances are the risk factors that predict the possible cerebral hemorrhage in the patients and should be taken seriously. The physicians should identify the high risk victims, so that they may be treated in a more precocious and effective way. This article is the first report of subarachnoid hemorrhage after Echis Carinatus bite.

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TABLE 1. Lab Data of the Patient on Admission and Discharge

	On admission	On discharge
Hemoglobin	7.8	12.3
MCV	75	78
Retic count	2.3	
BUN	131	47
Cr	10.1	3.2
CPK	970	
LDH	683	
PH	7.36	7.42
HCO3	17.2	19.7

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