



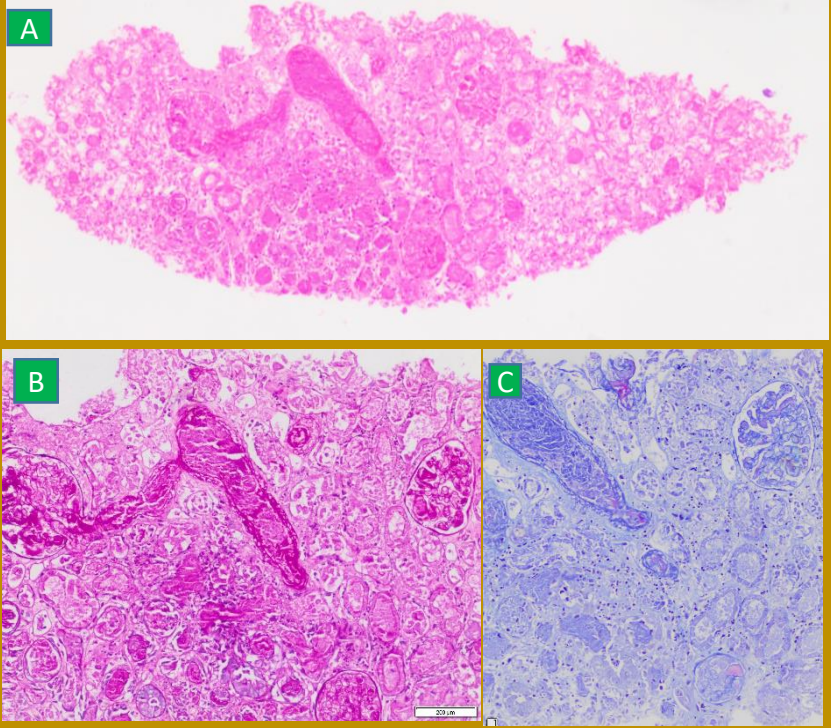
RENAL CORTICAL NECROSIS CAUSED BY TMA ASSOCIATED WITH VENOM-INDUCED CONSUMPTIVE COAGULOPATHY: REPORT OF TWO CASES.

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CASE 1

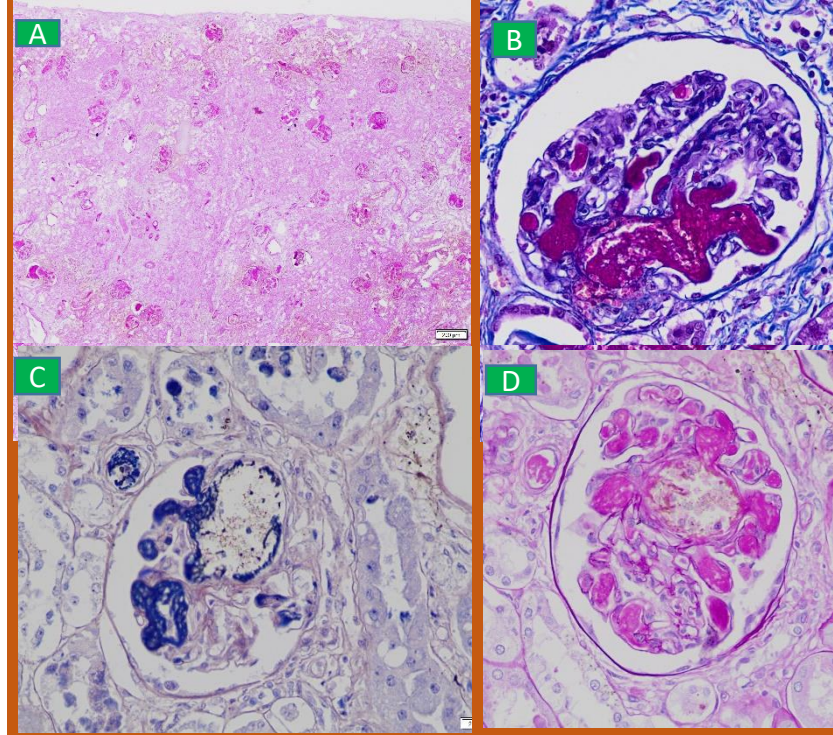
- A 10-year child had a snake bite following which 15 vials of anti-venom were given.
- Coagulation parameters revealed low fibrinogen, increased D-dimer, prolonged prothrombin time, and aPTT. Whole blood clotting time (WBCT) was >20 mins.
- During the course of admission, the child developed pallor, oliguria, and cola-colored urine.



Case 1: a) Renal cortical necrosis. b&c) fibrin thrombi in vessels and glomeruli(a & b- PAS, c-MT; a-40X, b&c- 100X)

CASE 2

- A 45-year-old female, who sustained a snake bite followed by hematuria. She received a total of 25 vials of anti-venom.
- On evaluation, WBCT was >20 mins. She had deranged INR, aPTT, low fibrinogen, raised D-dimer, and low platelet count.
- During the course of her illness, she developed oliguria and respiratory distress due to pulmonary edema. However, she developed cardiac arrest and could not be revived.



Case 2: a) Renal cortical necrosis. b&c) fibrin thrombi in glomerulus (a & d- PAS, c-PTAH, d-MT; a-20X, b-d- 400X)

Renal Pathology

Case 1: Biopsy revealed cortical necrosis involving nearly 60-70% of the sampled cortex. Fresh fibrin thrombi are noted in glomerular capillary loops and vessels.

Case 2: Renal tissue examined revealed extensive bilateral renal cortical necrosis. Thrombi are noted in the glomeruli and arterioles.

In both cases, the biopsy and clinical features were suggestive of TMA associated with venom-induced consumptive coagulopathy leading to renal cortical necrosis.

Immunofluorescence

All the immunoglobulins and complements were negative on direct immunofluorescence (DIF).

Follow-up

❖ Both cases succumbed to this snake bite.

DISCUSSION & CONCLUSIONS

❖ Snake venom-induced acute kidney injury (AKI) is multifactorial, which includes direct toxicity of venom, coagulopathy, disseminated intravascular coagulation, thrombotic microangiopathy (TMA), rhabdomyolysis, and secondary sepsis

❖ Renal cortical necrosis induced by TMA is a rare and devastating complication following envenomation with hemotoxic snakes.

❖ One should be watchful for the development of TMA in these cases.