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*RESEARCH ARTICLE*

# VASCULAR COMPLICATIONS OF SERIOUS VIPER'S ENVENOMATION: ABOUT A CASE

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## *Abstract*

Declared as a "neglected disease" by the OMS, snakebites are responsible for 421,000 cases of envenomation and 20,000 deaths worldwide. In Morocco, they are much rarer but remain serious with heavy consequences. It is exceptional to observe a mesenteric infarction following a bugloss envenomation. The physiopathological mechanism is not clearly established, but seems multifactorial. In a context of multivisceral failure, diagnosis can be difficult and therapeutic delay is life-threatening. We report the case of lower limb ischemia associated with mesenteric infarction in a 66-year-old patient complicating a horned viper bite.

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## Introduction:-

Declared as a "neglected disease" by the OMS, snakebites are responsible for 421,000 cases of envenomation and 20,000 deaths worldwide. In Morocco, they are much rarer but remain serious with heavy consequences. [1]

It is exceptional to observe a mesenteric infarction following a bugloss envenomation. The physiopathological mechanism is not clearly established, but seems multifactorial. In a context of multivisceral failure, diagnosis can be difficult and therapeutic delay is life-threatening.

We report the case of lower limb ischemia associated with mesenteric infarction in a 66-year-old patient complicating a horned viper bite.

**Description of the case:**
MO, a 66-year-old patient with no particular history, was admitted to the shock ward of the ARRAZI hospital in Marrakech for treatment of a viper bite (unidentified species). He was referred from southern Morocco (Ouarzazate region) at H36 post bite on the posterior surface of the left leg, where he received a dose of antivenom serum before his transfer to Marrakech.

On admission, the patient was conscious, hemodynamically and respiratory stable, the locoregional examination revealed an edematous limb, with the presence of bruises and blisters reaching to the root of the thigh, the signs of tension were positive.

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**Figure 1.2:-** Ecchymoses and phlyctenes extending to the root of the left thigh.

The patient immediately received an infusion of FAV-Afrique antivenom serum with vascular filling of crystalloids and transfusion of fresh frozen plasma and antibiotic prophylaxis.

The biological assessment initially showed a profile of a drawn intravenous coagulopathy (DIC) with D-Dimers raised to 800 µg/l

A PT at 50%, and a thrombocytopenia at 56,000/mm3. There existed a

renal failure with urea at 2 g/l and creatinine at 32
Mg/l. In addition, there was a table of rhabdomyolysis with
creatinine-phospho-kinase (CPK) at 8480 IU/l and myoglobin at
150 µ/l.

A relieving incision was placed initially in emergency, the postoperative consequences of which were marked by the installation of limb ischemia reaching as far as the root of the thigh. The indication of amputation of the limb has been made.

**Figure 3:-** Left lower extremity releasing incision.

Day 4 of his hospitalization, the patient presented an intestinal obstruction syndrome associated with hemodynamic instability requiring the administration of vasoactive drugs. Abdominal CT was in favor of small bowel obstruction on a mesenteric infarction associated with splenic and renal infarctions, pan colitis evoking an ischemic origin.

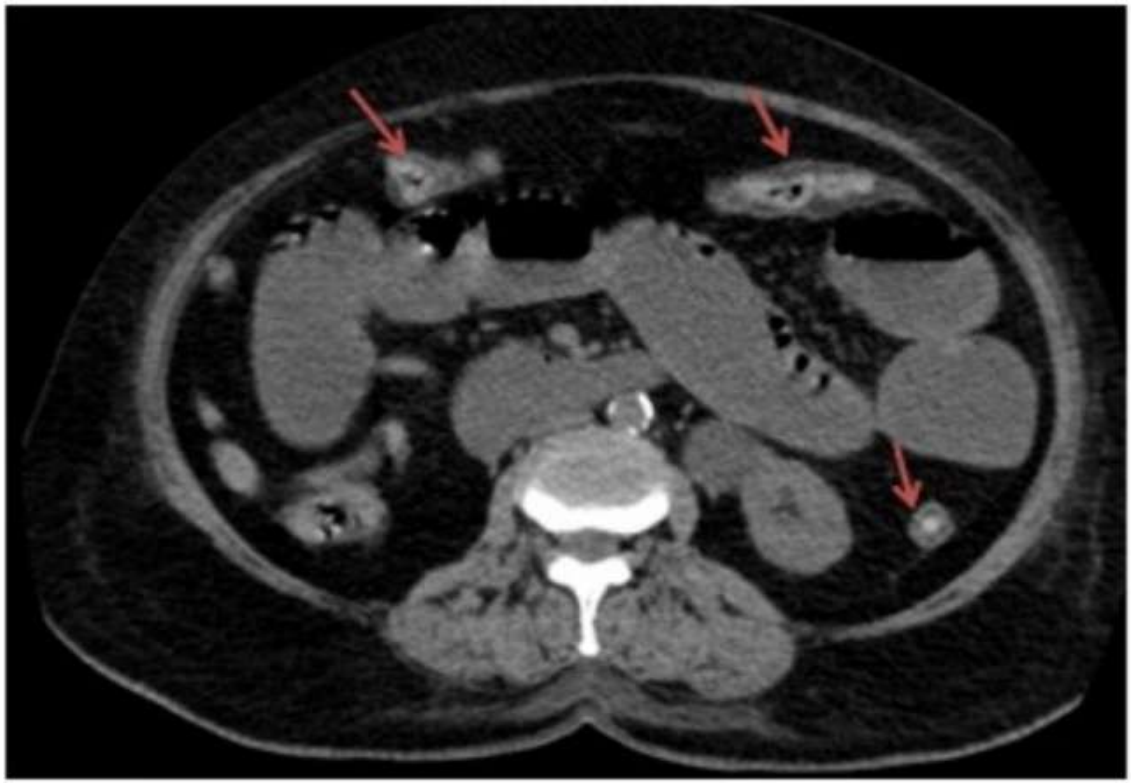

**Figure 4:-** Abdominal CT scan in axial section showing pan colitis.

Surgical management consisted of a 70mm small intestine resection with end-to-end gastro-small intestine anastomosis.

**Figure 5:-** Extensive bowel and caecal resectionthe evolution was unfavorable marked by the death of the patient on D2 post-op following a refractory septic shock.

## Discussion:-

Adders are the most commonly encountered snakes in Morocco, but cobras are occasionally encountered. [1] Disorders of haemostasis are observed in cases of viper syndrome, which usually associates local disorders (oedema, necrosis) and haemorrhagic syndrome: most often haematuria, conjunctival haemorrhage, digestive haemorrhage, haemoptysis, but any type of hemorrhage may be encountered. [2]

Several procoagulant proteins are present in viper venom explaining the occurrence of thromboses which may involve small and large vessels, particularly cerebral or even deep visceral. A snakebite is rarely complicated by cerebral infarction: in a series of 309 patients, only eight cerebrovascular complications (2.6%) were reported, including seven of a hemorrhagic nature and only one of the ischemic type [3].mesenteric infarction following Vipera aspis envenomation has been rarely described in the literature, E. Beer and R. Musiani studied a single case of envenomation by the viper Vipera aspis responsible for the formation of thrombosis in the ileocolic vessels, associated to coagulopathy and neurological symptoms. [4]

The cornerstone of treatment for viper's envenomation is specific immunotherapy. Adapted and administered early, it would reduce the risk of lethality by 90% and prevent the occurrence of thromboembolic manifestations.

## Conclusion:-

Although these ischemic complications remain exceptional after bugloss envenomation, a good knowledge of clinical, paraclinical and toxicokinetics allows the practitioner to urgently assess the severity of bugloss envenomation and therefore to establish an appropriate and effective therapeutic course of action.

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