



LOSS OF PULP SUBSTANCE FOLLOWING AN OPHIDIAN BITE (ABOUT A CASE AND LITERATURE REVIEW)

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CASE REPORT

ABSTRACT

In Morocco, snake envenomation is considered a serious public health problem. Epidemiological data remain poorly understood due to the absence of a national registry, as well as the non-medicalization of a significant proportion of patients victims of envenomation using traditional procedures. The precise identification of the aggressor snake is problematic because health professionals are not aware of the value of identification and have no training on the taxonomy of snakes in Morocco [1]. "A snakebite represents, in case of venom injection, a medical emergency accompanied by high morbidity and mortality in many parts of the world [2-3]. This is a medical-surgical emergency responsible for a very high mortality in Africa. In this work, we present the strategy adopted by our team in the management of a clinical case of ophidian envenomation complicated by necrosis of the pulp of the second finger.

INTRODUCTION

OBSERVATION:

Patient O.B, 32 years old, with a history of smoking at a rate of 10 PA, victim of a viper bite (from the family: *Cerastes cerastes*) in the pulp of his second left finger. The patient reports putting a tourniquet at the root of his finger, washing it thoroughly before being directed to the nearest hospital.

An hour after the bite, the patient was admitted to the emergency department, who removed the withers, immobilized the limb with the placement of a glaze, put a peripheral venous route and administered painkillers.

The patient was hemodynamically, respiratory and neurologically stable; he received antivenom immunotherapy 120 minutes after the bite.

The evolution was marked in the first 24 hours by edema gradually evolving from the second finger to the lower two-thirds of the forearm, the general condition remained stable, pain in the left upper limb was reported, calmed by analgesics.

The swelling stabilized after the first day; from the third day, a melting of the edema was noticed until complete disappearance after 10 days.

The patient has been transferred to our department; upon admission, we found a patient in good general condition, stable in hemodynamic, respiratory and neurological terms.

The local examination found a deep skin necrosis of 1 x 2 cm at the pulp of the second left finger, painful on palpation, with bare bone at the center of necrosis. Paresthesias were found in the rest of the pulp (Figure 01).



Figure 01: Necrosis of the pulp of the second left finger

The examination of the rest of the finger, hand and forearm is without particularity, no scar has been found and the skin is of good quality.

The patient received a standard X-ray of the left hand from the front and profile centered on the second finger, which did not show signs of osteitis.

Bacteriological samples were taken back sterile.

Under locoregional anesthesia (digital block), the patient benefited from a necrosectomy and a trimming and revival of the banks that exposed the underlying bone on a surface of 1 x 2 cm.

At the same time, skin coverage was provided by a rectangular Hueston advancement-rotation flap (Figure 02):



Figure 02: Drawing of hueston's flap

- Drawing drawn up preoperatively
- Proximal bank drawn in a bending fold
- Hinge of the flap on the radial edge to avoid dysesthetic scars during clamp movements.
- Cold blade incision according to the pre-established layout.
- Identification of the collateral vasculo-nervous bundle that will need to be left in place on the side of the longitudinal incision.
- Lifting of the flap from the longitudinal incision to the hinge on the opposite edge, respecting the plane of the digital channel.
- Advancement of the flap towards the loss of pulp substance.
- Suture by a monofilament 3-0.
- Coverage of the donor area of the flap by a total skin graft taken from the inner side of the left arm (Figure 03).



Figure 03: Final appearance after flap fixation and total skin graft at the donor area

The patient received a fatty dressing and immobilization of the finger for 15 days, then functional rehabilitation (10 sessions).

The consequences were simple, the patient recovered the mobility of the finger and pulp sensitivity. No local or general complications were observed with a setback of 06 months.

RESULT AND DISCUSSION

Viper bites are not a common pathology in the emergency department. They are observed in the warm season and are mainly found in young subjects. Despite the severity of this pathology, many series have reported the absence of a life-threatening consequence in the majority of patients [4]; however, snakebites at the hand are rare, but serious, cases of finger amputation following an ophidian bite have been reported [5]..

In our department, we receive patients at the stage of local or locoregional complications, it is still interesting to remember that it is necessary to avoid incision, sucking, and / or withers [6], ring objet circular must be removed (ring ..). The wound is disinfected and covered with a bandage. The bitten member is immobilized. A peripheral venous route should be put in place, analgesics administered, antibiotics only in case of superinfection. The use of icing remains controversial by some authors [6]. The patient is then evacuated as soon as possible to a hospital structure.

Antivenom immunotherapy remains the only specific treatment for ophidian envenomation, it is especially indicated in case of general manifestations; however, in case of serious or progressive local manifestations, antivenomial immunotherapy should be administered as soon as possible in order to save the function of the limb [7].

The only surgical treatment to be performed urgently in the bites of the upper limb, remains the discharge incision in front of a syndrome of the boxes; On the other hand, early excision-trimming of necrosis is at the origin of important sequelae, sometimes by unnecessarily sacrificing tissues with healing potential [6].

In our case, we waited a period of 15 days until the edema disappeared (the hand + the two lower shots of the forearm) and limitation of necrosis (pulp).

Coverage of a possible loss of residual substance should be made in the absence of local signs of infection (bacteriological samples).

Amputation of the finger by ophidian bite is rare. It is mainly due to:

- The virulence of the venom.

- Sa concentration in a small volume of fabric
- The use of garrot by some patients [5]

The coverage of a loss of substance due to an ophidian bite must of course be practiced on an aseptic basement. For the digital pulp of the second finger we preferred the Hueston flap for its simplicity and reliability.

Initially described to cover the loss of skin substances of the thumb [8], this flap has been shown to be reliable and effective in covering the pulps of other fingers long in particular the index finger [9].

The modified Hueston flap also advancing the vasculo-nervous bundle on the opposite side to the fleshy cutane seems to bring a better recovery of the tactile sensitivity, but we preferred the classic flap in order to avoid a possible limitation of the possibilities of coverage [10].

CONCLUSION

WHO has re-included venomous snakebites on the list of neglected tropical diseases. Most snakebite victims live in rural and/or agricultural communities, both children and adults. Location at the hand level is rare. However, and depending on the virulence of the venom, the bite at this level can engage the functional prognosis and sometimes the vital prognosis. Thus, urgent and well-adapted care including antivenomous immunotherapy is mandatory.

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