HUMAN BITES TO THE FACE TREATMENT WITH PEDICLE FLAP TECHNIQUE: CASE REPORT

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ABSTRACT

Human bite wounds are less common than those caused by animal bites, and in general are contaminated by a wider range of microorganisms, thus increasing incidence of infectious complications. Patient management in the emergency room consists in aesthetic and functional rehabilitation and infection prevention. The aim of this article is to report a case of human bite to the face with upper lip and oral commissure tissue loss of a patient, who was a victim of assault, seen at a public emergency hospital in Rio de Janeiro, providing information on the clinical characteristics of the injury and the most appropriate treatment for the case studied.

Keywords: bite, face, lip, flap

INTRODUCTION

Human bite wounds to the face have a high potential for infection and may lead to significant aesthetic and functional impairment. This type of injury occurs mainly during fights and sexual activity, affecting men and young people in particular (SANTOS et al., 2007; ALENCAR et al., 2014).

Human bites can penetrate, avulse, and crush tissue and are considered contaminated lesions (FONSECA et al., 2015). They are polymicrobial in nature and may cause infections that lead to severe complications. The main pathogens found in infected human bite wounds are Streptococcus, Staphylococcus, anaerobes and Eikenella corrodens (BROOK, 2003). Contaminated and necrotic tissue favor the growth of Clostridium tetani, the bacillus that causes tetanus (SANTOS et al., 2007). In addition, injuries also favor transmission of several systemic bacterial and viral infections, such as hepatitis B, hepatitis C, human immunodeficiency virus (HIV), tuberculosis and syphilis (REIS et al., 2013).

Thorough washing of the wound, associated with antisepsis and antibiotic therapy, leads to successful human bite treatment (ALENCAR et al., 2014). Lips are an important aesthetic-functional element of the face; injuries with tissue loss are thus a challenge in remedial treatment (SIQUEIRA et al., 2012). Lip reconstruction planning must consider the extent of the defect. In wounds with tissue loss of up to 30%, primary sutures without tension can be performed. Larger defects must be repaired with pedicle flaps (local or remote) or free grafts so as to obtain satisfactory results. The rotated pedicle flap of the upper lip is a surgical technique that renders a visually satisfactory scar,

sufficient vascular pedicle and restored oral contour (ALENCAR et al., 2014; NASCIMENTO et al., 2014).

CASE REPORT

A 23-year-old female patient, bitten on the face as a result of assault, received emergency care at the Oral and Maxillofacial Surgery and Traumatology service of Hospital Municipal Salgado Filho in Rio de Janeiro. While giving her history, the patient denied systemic diseases, use of medications and allergies. Upon physical examination, full-thickness laceration was observed, extending from the upper lip to the oral commissure on the right side with tissue loss (Figure 1).

At first, a thorough washout of the wound was performed with saline and antisepsis with degerming chlorhexidine. Due to the extent of the injury, the professional team opted for the rotated local pedicle flap surgical technique. The procedure was carried out under local anesthesia (2% lidocaine with adrenaline 1:100000). The musculomucosal flap was advanced from an incision in the ipsilateral cheek mucosa and blunt tissue divulsion to the defect site. The flap was positioned, and the suture was performed in sections using 3-0 vicryl in the muscle and mucosal layers, and on the skin, 5-0 nylon (Figure 2).

Figure 1. Human bite injury. A - Front view.B - Side view. C - Intraoral clinical aspect.

Figure 2. Clinical aspect after suture. A -Extraoral. B-Intraoral.

The patient was discharged with instructions on oral hygiene and suture care. The patient received a seven-day prescription for Amoxicillin 875 mg with potassium clavulanate 125 mg, and she was referred to the Internal Medicine service for education on HIV, syphilis, hepatitis and other diseases that can be transmitted through human bites. After 10 days, the suture was removed with the wound showing good healing aspect and with no signs of infection (Figure 3). The patient is in the tenth month of follow-up with satisfactory aesthetic and functional results and absence of postoperativecomplications (Figure 4).

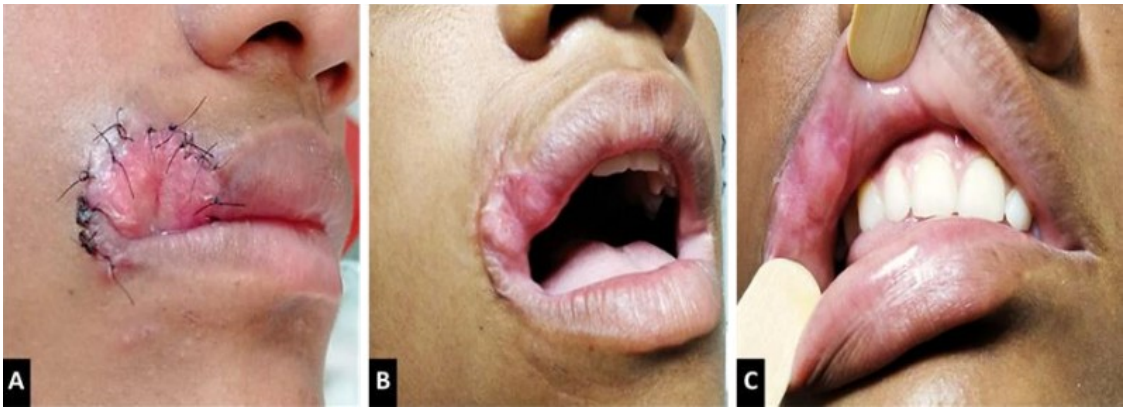

Figure 3. Postoperative. A - Clinical aspect seven days after treatment. B and C - After suture removal.

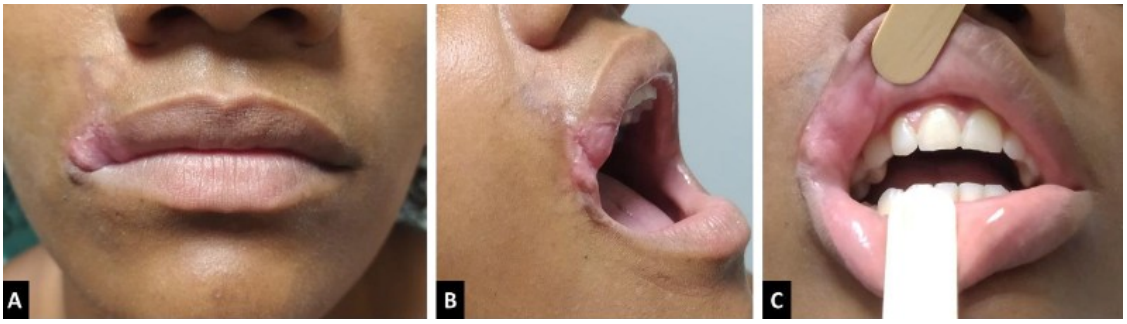

Figure 4. Postoperative. A, B and C - Tenth month of follow-up with satisfactory result

DISCUSSION

Human bites are less frequent than animal bites, but they have a greater potential for complications due to the wide polymicrobial spectrum present in human saliva. Cases of tetanus infection and transmission of the HIV virus, hepatitis B, hepatitis C, herpes simplex and syphilis are reported in the literature (REIS et al., 2013; ALENCAR et al., 2014).

A considerable number of aerobic and anaerobic microorganisms are found in human saliva. Bite wounds include perforations, lacerations, and

avulsions with a risk of infection and complications such as endocarditis, meningitis, brain abscess and sepsis. The refore, antibiotic treatment is recommended, and drug administration can be prophylactic or therapeutic. Streptococcus, Staphylococcus, Eikenella corrodens, Fusobacterium nucleatum and Prevotella species are the main pathogens found in infected injuries (BROOK, 2003; REIS et al., 2013).

Approximately 20% of human bites are to the face, which can cause significant functional, aesthetic, and psychosocial losses to the patient (ALENCAR et al., 2014). Lips have important functions in speech, facial expression, swallowing and aesthetics; therefore the repair of injuries with tissue loss in this anatomical structure poses a challenge and requires specialized reconstructive techniques (SIQUEIRA et al., 2012; NASCIMENTO et al., 2014).

This present case report of aggression by human bite is a patient in her third decade of life, in agreement with studies related to the topic that point to a higher prevalence of this type of injury in a younger population (21 to 30 years) and linked to assault cases. The predominance of this wound on the lips may be related to the prominence of this structure on the face and the fact that the aggressor is able to apprehend and avulse the victim's lip (SANTOS et al., 2007; ALENCAR et al., 2014).

Hospital emergency care of patients with facial human bites is infection prevention as well as aesthetic and functional rehabilitation. Copious saline washouts should be performed to decontaminate the wound and remove necrotic tissue when necessary. According to the literature, primary closure renders a better prognosis, as healing by second intention results in scars with unsatisfactory aesthetic results (ALENCAR et al., 2014). A 24-hour period between injury and suture is considered ideal for primary closure. However, some studies consider that tissue synthesis can be performed up to four days after the trauma if there is no infectious process installed (SANTOS et al., 2007).

When planning lip reconstruction, the main criterion to be assessed is the extent of tissue loss to be reconstructed. Lip tissue loss greater than 30% do
es not allow suture without tension, and therefore, flaps are necessary. The rotated pedicle flap of the upper lip is a surgical technique that provides visually satisfactory results, sufficient vascular pedicle, and correct restoration of the lip contour. (SIQUEIRA et al., 2012; NASCIMENTO et al., 2014). This surgical technique was performed in this case and the patient is satisfied with the aesthetic result and with the preservation of motor and sensory functions in the postoperative follow-up.

The current antimicrobial agent of choice for prophylaxis is amoxicillin with potassium clavulanate. Clindamycin is recommended for patients with a history of allergy to beta-lactams, and azithromycin is the most suitable choice for pregnant women and children. For the treatment of established infection, the same antibiotic protocols must be followed, assessing the need for intravenous medication administration (SANTOS et al., 2007; ALENCAR et al., 2014).

In this case, as the patient was unable to report her vaccination history, anti-tetanus prophylaxis was performed with 0.5 ml of Tetanus toxoid intramuscularly. She was also instructed on the risk of transmission of HIV, syphilis, hepatitis B and hepatitis C and referred to the basic health unit, where laboratory tests were performed with non-reactive results for these microorganisms.

CONCLUSION

Human bites to the face have a high potential for complications and transmission of infectious diseases. Patient management in the emergency room consists of aesthetic and functional rehabilitation and infection prevention. The initial management of the patient is crucial for treatment success, and therefore, the recommended protocols are wound irrigation, antibiotic therapy, tetanus prophylaxis and preferably primary closure.

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