

Facial Laceration: A Fight Against a Bite!

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Abstract

Background: Facial bite injuries can cause functional, emotional, and psychological distress to the victim. Dog bites are the most commonest injuries of all mammalian bites. We as oral and maxillofacial surgeons have reported a case of 75-year-old man with a dog bite injury on his face. Step-wise management of the wound and required anti-rabies therapy has been discussed. **Materials and Methods:** The patient was immediately given anti-rabies prophylaxis and thorough debridement of the wound was done with various antiseptic solutions. After satisfactory debridement, margins of the wound were freshened and closure of wound was done with resorbable and non-resorbable sutures. Post-operatively, the patient was put on antibiotic regimen. **Results:** Not only esthetic but also functionally acceptable results were achieved. Locally applied antiseptic solutions and anti-rabies prophylaxis proved its efficacy in infection control. **Conclusion:** Each bite injury will have different treatment outcomes. Hereby we discuss one of the methods in the management of facial dog bite with most easily available medicaments.

Keywords: Dog bite, facial laceration, management

INTRODUCTION

Facial bite injuries can cause functional, emotional, and psychological distress to the victim. The most commonly reported bite injuries are ones given by dogs which is then followed by cats and humans.^[1] Immediate and correct medical intervention are the keys to successful outcomes. Dog bites can not only cause esthetic deformity but also lead to morbidity and death if not managed correctly. Awareness on step-wise management of the wound and appropriate use of the anti-rabies therapy are mandatory for all healthcare providers.

CASE REPORT

A 75-year-old man with his relatives visited to our emergency service department with a dirty lacerated wound on his left side of the face. He complained of active bleeding, burning, and pain at the wound site. We, team of oral and maxillofacial surgeons, attended the patient as it was a facial laceration. The patient was unable to provide complete information and thus the relatives accompanying the patient were queried for information. They gave a history of a dog bite 4 h before arrival. They were asked about the breed of the dog which attacked, its

location, and the vaccination status of the dog. Relatives and the patient were unaware of the vaccination status of the dog as it was a stray dog. The patient was assessed for airway–breathing–circulation and stabilized. An aliquot of 0.5 mL of injection tetanus toxoid booster dose was given intramuscularly as he had not received tetanus toxoid booster in the past 5 years. The patient was locally infiltrated with human rabies immunoglobulin–20 IU/kg, and 1 mL of anti-rabies vaccine as first dose was given in the thigh. The healthcare authority was told to inform the municipal corporation for quarantining the dog for testing and further observation. Required consent forms were filled. Photographic documentations were done.

After all necessary documentations, injection augmentin 1.2 g was given intravenously. On inspection, right side supraorbital laceration and right upper eyelid and forehead laceration were noted and categorized into Category III bites (according to the National Rabies Control Programme) [Figure 1]. Wound management was done

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in supine position under 2% lignocaine HCl + 1:200,000 adrenaline (Lignocaine Hydrochloride Injection I.P. LOX* 2%) local infiltration around the wound margin. Thorough debridement of the wound with 10% w/v povidone-iodine solution I.P. (Betadine-Standardized Microbial Solution 10%, India) and chlorhexidine gluconate and cetrimide solution (Savlon Antiseptic Solution Alliance Formulations, India) was done for 10–12 min, after which irrigation with diluted hydrogen peroxide (1 drop of Hydrogen peroxide in 2ml saline) was done for 2–3 min taking care that the irrigating fluids do not enter the eye. Lacerations were assessed for foreign body materials, dog hair, etc. and removed. Final irrigation was done with 150–200 mL of saline at both the sites. Hemostasis was achieved and suturing was started within 6 h of attack.

Wound margins were freshened by removing the necrosed tissue with preservation of vital tissue as much as possible for esthetic and functional closure of the wound [Figure 2(A)]. 4-0 Vicryl (reverse cutting) was used for closure of the inner layer of the forehead and supraorbital laceration, whereas 5-0 Prolene (cutting) was used for the skin of the same. Esthetic closure of the left eyebrow was achieved. The laceration of the left eyelid was closed with 5-0 Vicryl (reverse cutting) for the inner layer and with 6-0 Prolene for skin over the eyelid [Figure 2(B)]. Muscle entrapment was checked by asking the patient to close, open, and rotate his eyes in all gazes. Closed dressing was given after application of neomycin ointment along the sutures. The patient was referred to a nearby government center for further anti-rabies therapy. As the patient was denied admission, he was kept under observation on

outpatient basis and was advised Tab Augmentin (625 mg) BD and Tab Metrogl 400 mg TDS for 10 days and he was re-examined in the next 24 h. Further follow-ups were done on 3rd, 7th, 14th day and 1 month [Figure 3]. Suture removal was carried out after 10 days.

DISCUSSION

Management of such soft tissue injuries due to animal bites have been and will remain a challenge. Treatment of dog bite injury is selected on the basis of type of wound, extent of wound, and breed of dog.^[2] In this reported case, we have aimed for minimal morbidity with esthetic functional reconstruction. Rabies is a neurotrophic virus that may lead to death if not managed appropriately. Face is highly vascularized and thus healing is faster and has less chances of infection.^[3] However, rabies if occurs can be fatal. Its severity ranges from psychosis, speech impairment, seizures, hallucinations, muscle spasms, cavernous sinus thrombosis, coma to death.^[4] Hence, prompt management becomes the most valuable part for achieving good surgical outcomes.

CONCLUSION

Each bite injury will have different treatment outcomes. However, basic guidelines for the management of wound remain the same, viz., vaccination status of the patient and the dog, thorough debridement of the wound along with esthetic and functional reconstruction, and anti-rabies therapy. This case reports an individualized multidisciplinary approach toward facial dog bite injury.



Figure 1: Pre-operative photographs of the patient

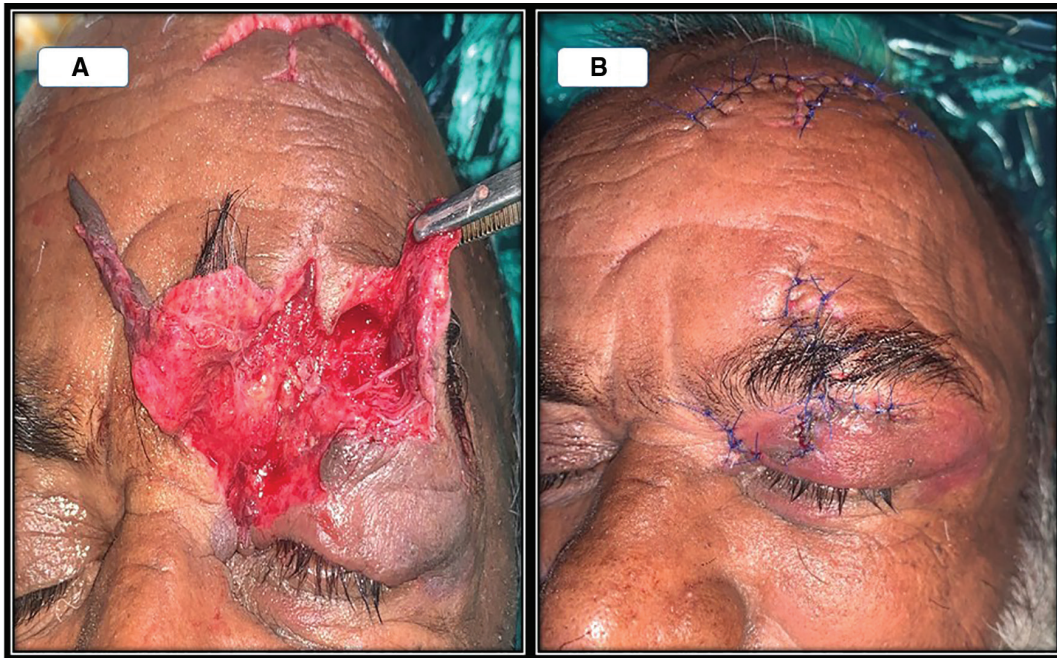


Figure 2: (A) Wound debridement. (B) Complete closure of the wound



Figure 3: (A) 7th day follow-up and (B) 1 month follow-up

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Conflicts of interest

There are no conflicts of interest.

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