Case Report

DOI: http://dx.doi.org/10.18203/2349-2902.isj20172804

Orofacial injury by human bite: experience at a rural health centre

S. N. Jajoo, Gaurav Pal*

Department of Surgery, Jawaharlal Nehru Medical College, Sawangi, Wardha, Maharashtra, India

Received: 10 May 2017 Accepted: 05 June 2017

*Correspondence: Dr. Gaurav Pal.

E-mail: palgaurav16@gmail.com

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ABSTRACT

Human bite injuries are rare and are usually the result of fight and an inevitable helpless state of opponent who commit such crime. The aim of this article is to present two such cases which were managed at a rural health centre. The first patient is a young 22-year male who was bitten by same age group person over the tip of nose resulting in an avulsion injury. The second case is 29-year male patient was bitten at right upper lip. Both patients were managed at a rural health centre and both had satisfactory results.

Keywords: Human bite, Orofacial injury

INTRODUCTION

Bite injury is one of the type of injury which can be faced in emergency department. Animal bites are common but human bite accounts for 20% of all bite injury. Human bite wounds in the form of oval or semilunar hematomas and abrasions can be seen as the result of sexual crimes, child abuse, and physical altercations (so-called self-defense bites), or even consensual sexual activity. Indirect human "bite" wounds caused by a blow from the first to another person's teeth have their own specific pattern of injury (known as reverse bite injury, clenched fist injury, or fight bite). 4,5

Studies of soft tissue infections caused by human bites have shown that the commonest organisms isolated are *Viridians streptococci*, *Streptococcus anginosus*, *Staphylococcus aureus*, *Eikenella corrodes*, *Haemophilus sp.*, *Enterobacteriaceae* (e.g. *Klebsiella sp.*, *Enterobacter sp.*) and *Anaerobes* (e.g. *Fusobacterium sp.*, *Prevotella sp.*, *Peptostreptococcus sp.*).^{6,7}

The article includes two cases of human bite over orofacial region and their management who presented in ED at a rural health center.

CASE REPORT

Case 1

A young 22-year male was referred to emergency department of Acharya Vinobha Bhave Rural Health Centre after sustaining a human bite injury over his tip of nose which was sustained after a fight with the coworker. The male presented 8 hours post injury (Figure 1 and 2). On clinical examination avulsion injury was present over nose involving tip and right ala. The cartilage was not intact and the avulsed tissue showed signs of necrosis. There were two semi lunar bite marks present. Patient had no other injury. His vitals were stable. Tetanus toxoid was given immediately and was given rabies vaccination. Patient was given intravenous cephalosporin as antibiotic coverage. The wound was thoroughly washed and was debrided for any foreign material. The defect over nose was corrected by taking right nasolabial flap. Post procedure dressing was opened after 6 hours for any changes and was redressed. Later the dressing was opened after 24 hours and was kept open. Patient was discharged in stable condition and flap revision surgery was done after 21 days. Figure 3

represents post-operative day 21 while Figure 4 shows post revision flap status at the end of 32 days.



Figure 1: Extent and site of injury over tip of nose.



Figure 2: Two semi lunar bite marks.



Figure 3: Post-operative day 21.



Figure 4: Post-operative day 32 after flap revision surgery.

Case 2

A 28-year male patient came to ED with history of human bite over right upper lip 4 hours ago during a fight. The bite was done by an elderly male of 67 years. On examination vitals were stable and there was a injury over the right half of upper lip involving the right angle. The injury was not extended into the oral mucosa. There were semi lunar bite marks present. Figure 5, 6, 7 and 8 shows site and extent of bite injury in patient. The patient was given anti rabies vaccination, tetanus toxoid vaccination and antibiotics coverage during the treatment.



Figure 5: Bite injury over upper lip, front view, semilunar marks can easily be appreciated.



Figure 6: Lateral view.



Figure 7: Intact buccal mucosa.



Figure 8: Extent of injury.



Figure 9: Intra-operative view after debridement.



Figure 10: Two parallel incisions given over buccal mucosa for raising a flap.



Figure 11: Raised buccal mucosa flap



Figure 12: Post-operative view after reconstruction with buccal mucosa flap and z-plasty.



Figure 13: Post-operative day 14.



Figure 14: Post-operative day 14.

Debridement was done and margins were freshened creating a raw area Figure 9. The raw area was covered by taking oral mucosa advancement flap with z-plasty suturing. Figure 10, 11 and 12 are intra-operative pictures.

Dressing was opened next day and was discharged next day only. Figure 13 and 14 are post-operative pictures on day 14. Both the cases were satisfied from the results obtained.

DISCUSSION

Human bite injuries are rare injuries and possess a great challenge in management specially in the orofacial region due to higher cosmetic value. Human bite injury is more fatal and complicated than the animal bite injury due to higher oral bacterial flora infestation.⁸ Human bites are encountered more over hand and upper limb followed by head and neck region.⁹

In our case report both patient had orofacial human bite injury and required surgical closure via flap.

In our case report first patient was managed by taking right nasolabial flap and second patient was managed by taking oral mucosal advancement flap. Both the patients were managed surgically after thorough washing of the wound by saline and freshening the margins. Both the patients were given tetanus toxoid, anti-rabies and I.V. cephalosporin as antibiotic coverage. Uchendu reported a five-year series consisting of 37 cases of human bite to the lip. 10 All the patients underwent primary closure of the lip defects which was successful, while we had closed the wound by oral mucosa advancement flap. Asuku ME, et al employed superiorly based nasolabial flap for coverage of nasal ala defects while in a study by Ratnakar Sharma et al, out of 21 patients having sustained nasal injuries, paramedian forehead flap cover was employed as method of reconstruction of nasal defects in 16 cases whereas skin grafting was done in 5 patients for coverage of defects. 11,12

Lindsey D et al, in their study of incidence of infection in cases of human bite injuries recorded the potential for infective complications to be between 10-20%. None of the patient had any post-operative complication in our case study.

CONCLUSION

Human bite injury is a complicated injury which needed to be managed early to avoid infectious complication. Cosmesis is the major concern in case of facial human bite injury and hence to be managed accordingly leaving a minimal scar and maintain the satisfactory function. Antibiotic coverage, tetanus toxoid and anti-rabies vaccination is to be given in each case irrespective of site of injury.

Funding: No funding sources Conflict of interest: None declared Ethical approval: Not required

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Cite this article as: Jajoo SN, Pal G. Orofacial injury by human bite: experience at a rural health centre. Int Surg J 2017;4:2377-80.