

MANDIBULAR FRACTURE FOLLOWED BY TRADITIONAL SPORTS JALLIKATTU – A CASE REPORT

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ABSTRACT

Jallikattu (bull embracing) is a traditional game and it is typically practised in India, Tamilnadu. Trauma involved in maxillofacial region due to bull gore attack was less frequently reported. However due to the anatomic nature of mandible this is the more commonly involved in the maxillofacial region. This case report involves the left parasymphysis and right angle fracture of mandible managed with open reduction and miniplate fixation, soft tissue laceration of lower lip was managed with layer by layer closure.

INTRODUCTION

Jallikattu is a traditional sports in India practised during mattu pongal celebration especially in southern part of tamilnadu. As part of this event, the bull is released into a confined area and participants in alternate attempts to stop its movement by embracing its hump. Blunt injuries can occur as a result of the force sustained from impact with the ground after being thrown from the bull. [1] The mandible is the most prominent bone in the face and frequently involved in maxillofacial trauma. Injuries sustained from bulls are extensive and often result in prolonged hospitalization. Most soft tissue injuries are penetrating occurring as a result of direct goring from the horn. The size and contamination of bull horns complicate penetrating injuries due to a higher incidence of wound infection and delayed healing. [1] The complexity of mandible fractures varies based on pattern, degree of comminution, displacement, and favorability. Depending upon the severity of injury the treatment varies. For severe displacement and malocclusion open reduction and internal fixation is the best treatment option to achieve proper result. The primary goal in soft tissue management is to achieve rapid healing with optimal functional and aesthetic result.

CASE REPORT

A 21 years old male patient with mandibular trauma due to bull gore attack during jallikattu sports reported to the department of oral and maxillofacial surgery, CSI College of Dental Science and Research, Madurai, Tamilnadu, India. Clinically the patient showed tenderness, paraesthesia, step deformity, segmental mobility in the right parasymphysis region and left angle of the mandible with deranged occlusion. OPG and CT reveals, right parasymphysis and left angle fracture of mandible. Informed consent obtained from the patient. Under GA open reduction and internal fixation done. After IV Paracetamol, Augmentin, Metranidazole for 4 days patient was discharged from the hospital. After 1 week of surgery patient reported with soft tissue laceration in the lower lip due to bull gore attack again. Laceration of size 4 X 7 cm in diameter noted on lower lip extending till the lower border of mandible. Plate exposure was seen in relation to right parasymphysis region. Displacement of plate and screws are confirmed with OPG and there is no evidence of plate dislodgement. Wound debridement done and double layer closure done with 3-0 vicryl and 4-0 ethilon.

DISCUSSION

Bull borne injuries are commonly seen in rural area. The injuries produced by bull goring can be classified into blunt wounds, or contusions, and penetrating, or open, wounds [2]

David Martinez-Ramos et al, [3] did retrospective study in the A retrospective study in Spain with a review of medical records of patients admitted to the General Surgery service of the General Hospital of Castellon, with diagnosis of wound by bull gored between January 1978 and October 2005 shows injury in Head and neck region of 12 cases.

Caglayan kasim et al [4] did large animal related injuries and reported that 29% of injuries were attributed to cow attack, with maxillofacial and cranial injuries comprising 44% and 18% of all injuries. Wounds of the facial area represent 8% of all wounds caused by bull goring and are divided equally between the facial and cervical regions and fractures most frequently produced in this type of accidents are for this order the jaw, the malar and the of the nasal bones.

Siddharth Dubey et al [2] bull horn injuries are more common in males compared to females. It is very dirty and should be considered contaminated and likely to develop serious infective complications from the time of occurrence. The tetanus vaccination and gammaglobulin administration are imperative and should be given systematically to all patients with this type of wound. Horns carry aerobic and anaerobic bacteria, so antibiotic prophylaxis and treatment are a high priority in these patients.

The depth of the wound depends on the speed at which the bull was moving at the time of impact and the animal's weight. The position of the person being charged also is important (the points of support of the subject determine how much resistance is offered against the force of the horn), as well as the presence of any elements of counter resistance. [2]

Various treatment options available to treat the mandibular fracture and many clinical results have been reported among which miniplate fixations are more frequently used method for mandibular fracture reduction due to its simplicity and good clinical outcome. [5] In this case we used noncompressible monocortical titanium miniplate fixation for fracture reduction.

Soft tissue lacerations of the lip is a must to have a satisfactory aesthetic outcome. Primary closure can be attempted if less than 30% of the lip is involved. However, larger defects would require skin grafting and local flaps. It's always important to restore the sensory and muscle function. [6]

Lacerations are caused by sharp injuries to the soft tissue. They can have sharp, contused, ragged, or stellate margins. The depth of penetration should be explored carefully and closure is performed using a layered technique. If the margins are bevelled or ragged, they should be conservatively excised to provide perpendicular skin edges to prevent excessive scar formation. [7] In this case, the lip laceration is repaired with thorough surgical debridement and layered closure technique.

Although the procedure was done twice in short duration of interval, there was very minimal aesthetic compromise with negligible scarring and patient satisfaction was high.

CONCLUSION

Injuries related to bull gore attack is more frequent in rural areas and it is more common in middle age group males compared with females. The main complication occurs due to bull gore attack is infection due to wound contamination. So the treatment should be focused on appropriate wound debridement, with proper antibiotic coverage and tetanus toxoid administration followed by fracture management. Soft tissue injuries in maxillofacial region aesthetic is one of the prime concern and that should be managed by early tissue debridement followed by definitive repair to achieve good final outcome.

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Figure 1:Anterior Open Bite



Figure 2:Cbct



Figure 3:CBCT



Figure 4: Angle Plating



Figure 5: Parasymphysis Plating

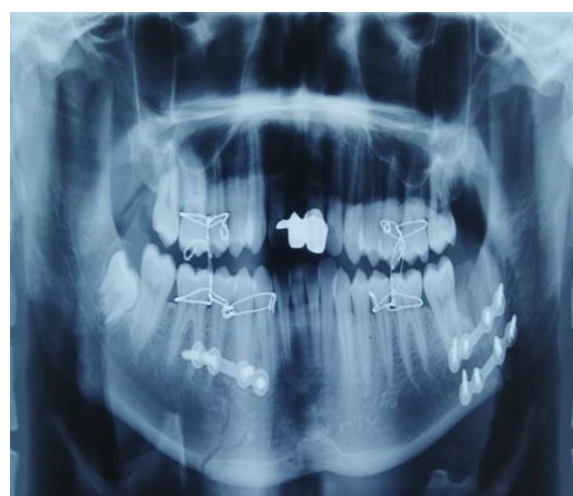


Figure 6: Post Operative Opg



Figure 7: Soft Tissue Laceration



Figure 8: Post Operative Image