Clinics in Surgery

Case Report
Published: 29 Nov, 2017

An Unusual Case of Bull Gore Injury to the Palate - Case Report

Pandey S, Mohapatra DP, Sudhanva HK, Chittoria RK, Friji MT and Dinesh kumar S*

Department of Plastic Surgery, JIPMER, India

Abstract

Bull gore injury is one of the commonest presentations of traumatic injuries especially in the rural population. The injury is primarily caused by the tip of the horn of the animal and it is usually associated with blunt injuries to other organs as a result of impact of multiple hits by animal. Abdomen and perineum being the commonest organ involved, other organs are lower limb, upper limb, chest, etc. Palatal lacerations are more common in children while putting objects in mouth like wooden stick, pipe, straw, pen, pencil etc either by accidental pushing the object inside the mouth or by falling down with object inside. Soft palate is usually involved. Adult palatal injury is often associated with maxillofacial injuries due to road traffic accident or assault. Through this paper we present an unusual case of isolated full thickness palatal laceration due to bull gore injury to an adult, as bull gore injuries are known for involvement of abdomen, Perineum, limbs etc. and often associated with multiple injuries.

Keywords: Palate injury; Bull gore; Palatal laceration; Traumatic cleft palate

Introduction

Isolated Palatal injuries are usually seen in soft palate region and may extend up to posterior pharyngeal wall, tonsilar pillars etc. The injury is usually penetrating type and caused by objects like wooden stick, pipe, straw pen, pencil etc. Isolated palatal injuries are seen more commonly in pediatric age group [1]. Among adult population isolated palatal injuries are uncommon and are usually associated with maxillofacial trauma due to assault or road traffic accidents. Bull gore injury is not an uncommon presentation of rural population involved in agricultural activities. The injury is caused by the horn of the animal like Cow, buffalo, bull etc. Some time these injuries are frequently seen in specific festivals like Muttu Pongal, celebrated in Southern states of India. Organs commonly affected in bull gore injuries are abdomen, perineum, thighs and buttocks. Severity of injury varies according to the impact of force and organ involved. Bull gore injuries are often associated with multiple organ injuries and hence careful and thorough examination is needed while initial workup of the patient in the emergency medicine department.

Case Presentation

A 25 year male presented in plastic surgery emergency in our institute with complaint of puncture wound in the roof of the mouth of 3 hours of duration due to gore by his pet bull while he was trying to put ornament over the horn of the bull. Thorough systemic and local examination was performed and other injuries were ruled out. There was no history of loss of consciousness, breathing difficulty or active bleeding. On examination patient was found to be stable with all vital signs within normal limit. On local examination a full thickness vertical laceration was found in the right side of the soft palate approaching to midline, measuring about 5 cm × 1 cm, with irregular borders. No active bleed was noticed from the wound.

Patient was planned for palatal repair in layers in emergency operation theater under general anesthesia. After obtaining informed consent, necessary investigations and pre anesthetic check up was done and patient was taken up for surgery. He was positioned supine with neck extension under general anesthesia with endotracheal intubation. Throat pack was inserted and a Kilner-Dottmouth gag was applied. Intraoperative wound evaluation revealed a full thickness laceration of 5 x 1 cm on right side of the soft palate with ragged margins, obliquely oriented, through the mid line. The uvula was spared and deviated to the opposite side (Figure 1). The wound was irrigated thoroughly with normal saline and diluted adrenalin infiltrated around the laceration. Nasal and oral mucosal layers dissected and both the mucosal flaps were raised under 4x loupe magnification. The palatal

OPEN ACCESS

Correspondence:
Mohapatra DP, Department of Plastic Surgery, JIPMER, Puducherry, India-605006, Tel: 07418282494; E-mail: devimohapatra1@gmail.com

Received Date: *06 Sep 2017*
Accepted Date: *16 Nov 2017*
Published Date: *29 Nov 2017*

Citation:
Pandey S, Mohapatra DP, Sudhanva HK, Chittoria RK, Friji MT, Dinesh kumar S. An Unusual Case of Bull Gore Injury to the Palate - Case Report. Clin Surg. 2017; 2: 1764.

Figure 1: Pre operative picture showing full thickness palatal laceration.

Figure 2: Post operative picture showing closure of wound.

muscles were identified and separated on both sides of the wound. Nasal mucosal layer was closed with interrupted sutures using vicryl 4-0. Muscle was repaired and palatal sling reconstructed. Oral mucosal layer closed with interrupted sutures using vicryl 4-0 (Figure 2). Throat pack was taken out, mouth gag was removed, patient extubated shifted to intensive care unit. Post operatively patient was managed with intravenous fluid, antibiotics, analgesics and antibiotic mouth wash. The postoperative period remained uneventful, and wound healed well.

Discussion

Bull gore injuries have been well described in literature. It is more common in rural population due to involvement in agricultural activities and rearing the animals like cow, buffalo, bull etc. Injuries occur in villagers while feeding them or during milking. Another well known cause of bull gore injury is cultural trends of bull fighting during festival season. Muttu Pongal celebration in south India and Pamplona bull festival in Spain are famous festivals. Bull gore injuries are more common in abdomen, chest, perineum, back, eye, etc [2,3]. Mechanism of injury- the injury is usually caused by projecting horn of the animal. The injury is usually leads to penetrating kind of wounds. Other injuries are blunt trauma injuries as a result of sustaining multiple hits by animal's head and limbs. The patters of injury may vary from closed contusions to massive degloving injuries. The injuries are associated with contamination, impaction of foreign bodies like cloths or horn chips [4]. Injuries may range from small lacerations which heal by secondary intervention, to large wounds which require urgent major surgical procedure. Sometimes injuries are severe enough to cause life threatening conditions like Chest trauma, Pneumothorax, Hemothorax, Diaphragmatic hernia, Blunt trauma abdomen leading to Spleenic or liver laceration, Bleeding, Shock, etc [5,6]. Palatal injuries are more common in pediatric age group due habits of putting objects in the mouth like pen, pencils, toys, sticks, straws, pipes etc. The injuries are caused by accidentally pushing the objects inside or due to falling down while the object in the mouth. Soft palate is commonly affected. Buccal mucosa, tonsilar pillars, oro pharyngeal region etc may be involved [5]. Isolated palatal trauma in adult is uncommon. Palatal injury in adult is usually associated with maxillofacial trauma due to road traffic accident or assault. Adult palatal injuries tend to involve both soft and hard palate. Severe Perineal injuries are not uncommon and may lead to deep perforations, excessive bleed, extensive degloving of penis or scrotum or extensive vaginal injuries [7]. Through this paper we report an unusual case of isolated palatal laceration due to bull gore injury as oral cavity is a protected organ and is very unlikely to be involved in such injuries. To the best of our knowledge such a case has not reported in English language literature.

Conclusion

Agricultural activities and cattle rearing is integral part of rural population of India. Most of the time people sustain injury while giving care, feeding, milking, farming, practicing bull fight etc. Extreme care should be taken while involvement in such activities as they result in a wide range of injury from minor to severe life threatening injuries.

References

1. Radkowski D, McGill TJ, Healy GB, Jones DT. Penetrating trauma of the oropharynx in children. Laryngoscope. 1993;103(9):991-4.
2. Rani M, Rohit, Sharma A, Dikshit PC. Injuries which are caused by Bull Horns: Patterns and Prevention Protocols. Anil Aggrawal's Internet Journal of Forensic Medicine and Toxicology [serial online]. 2010;11 (1).
3. Singh RI, Thomas R, Alexander TA. An unusual case of a bull gore injury. Aust N Z J Ophthalmol. 1986;14(4):377-9.
4. De Liano A, Inigo N. (Bull horn injuries – nine year experience). In: Surgical Diseases around the World. Pamplona, Navarra: Hospital de Navarra, 1998.
5. Takenoshita Y, Sasaki M, Horinouchi Y, Ikebe T, Kawano Y. Impalement injuries of the oral cavity in children. J Dent Child. 1996;63(3):181-4.
6. Nabi G, Seenu V, Misra MC. Intercostodiaphragmatic Hernia Secondary to a Bull Gore Injury: A Delayed Detection. Indian J Chest Dis Allied Sci. 2002;44(3):187-9.
7. Kulkarni MR, Gangadharaiah M, Kulkarni SR. Bull Gore Injury of the Vagina. J Clin Diagn Res. 2013;7(1):158-9.