

Surgical management of deep tongue laceration in a cow: A case report

S. Mahendra¹, S. Debajyoti^{2*}, M. Karunakarn², A.Teja³ and D. Kinkar²

¹Veterinary Dispensary, Hennagara, Anekal taluk, Bengaluru- 560 105, Karnataka, India; ²Animal Reproduction Gynaecology and Obstetrics, ICAR-National Dairy Research Institute (ERS), Kalyani, Nadia- 741 235, West Bengal, India; ³Animal Reproduction Gynaecology and Obstetrics, ICAR-National Dairy Research Institute (SRS), Bengaluru- 560 030, Karnataka, India

Abstract

A five year-old Holstein Friesian (HF) cow was presented to the dispensary of Hennagara, Anekal taluk with an anterior-laterally placed, deep cut in the tongue, inflicted by a sharp object. Clinical examination also showed blood-tinged saliva with severe pain and reduced feed intake. The wound was treated surgically under sedation with xylazine and local infiltration of 2 percent lignocaine. The surgical wound was sutured with absorbable suture material (Vicryl® No. 1) in simple interrupted pattern. Post-operative management included administration of broad-spectrum antibiotics, analgesic, multivitamin supplementation along with intravenous fluid therapy. The animal owner was advised to provide soft feed to the animal for the next 10 days. The animal recovered uneventfully in due course.

Key word: Cattle, Lingual surgery, Lingual trauma

The tongue is the prehensile organ for majority of the domestic animals. In grazing ruminants, laceration of the mouth cavity and tongue is very common. The tongue is mostly injured by the thorn, barbed wire, needles (Jena *et al.*, 2017), sharp edges of leaves such as sugarcane leaves, or sharp objects such as wooden or metallic foreign bodies (Engelbert and Tate Jr, 1993) present on the ground. This injury either can be deep or superficial in nature (O'Connor, 1994). In superficial injury, surgery is not required, and the wound usually heals without any treatment. In deep injury or large lacerations, surgical intervention is inevitable (Aher *et al.*, 2018).

A five year-old Holstein Friesian cow was presented to the dispensary of Hennagara, Anekal taluk with a day old injury in the tongue. On clinical examination, the rectal temperature was found normal (101°F), and respiratory rate was high (40/min). The animal was in severe pain and was unable to take feed. On examination of the mouth, it was found that there was an anteriorly placed, deep cut on the tongue, bifurcating it longitudinally and excessive

salivation, with blood-tinged saliva. The sensory and motor function of the tongue was normal as the animal was able to move the tongue in all directions and had the tendency to revert it back into the mouth once pulled outside.

After examining the animal it was decided for surgical intervention. All the postsurgical complications were explained to the owner, and consent was obtained to perform the surgery. The animal received intramuscular administration of xylazine @0.1 mg/kg body weight (@Xylaxin; Indian Immunologicals Ltd. Hyderabad, Telangana) (Radostits *et al.*, 2014). The animal was restrained in right lateral recumbency, and a mouth gag was applied to keep the mouth open. The tongue was exteriorized, and a tourniquet was applied with the help of wide cotton gauze at the base of the tongue to prevent excessive blood loss during the surgery. The tongue was cleaned with diluted povidone iodine solution, and 15 mL of 2 percent lignocaine hydrochloride (@Lox 2% Injection, Neon Laboratories Ltd.) was infiltrated locally at the site. The site was debrided surgically to remove all the necrotic tissue followed by suturing the dorsal and ventral

*Corresponding Author, E mail: sarkardebajyoti@gmail.com

Indian Journal of Animal Health, December, 2021

Surgical management of deep tongue laceration in a cow



Fig. 1. Photograph representing fresh cut wound in the tongue



Fig. 2. Photograph showing simple interrupted suture applied on dorsal and ventral floors separately on the tongue



Fig. 3. Photograph showing tongue post-recovery

surfaces of the tongue separately with Vicryl® No-1(Ethicon), in simple interrupted pattern. Post-operative treatment included intravenous administration of amoxicillin and sulbactam 3gm (@10 mg/kg body weight (®Amoxirum Forte, Virbac Animal Health India Pvt. Ltd.), meloxicam 20 mL (®Meloxi, Vetsfarma Ltd.) intravenously and Ringer's lactate 2 litres along with multivitamins (®Tribivet, Intas Pharmaceuticals Ltd.) for 7 days. Also, the owner was advised to provide soft food to the animal for the next ten days. The suture materials were remained unabsorbed in the ventral side of the tongue and were removed manually after 10 days, and the animal recovered uneventfully.

Glossitis is always involved with the reduction in feed intake of the animal, and therefore, it is directly linked with health and productivity. Superficial injuries heal on their own without any medical assistance (Aher *et al.*, 2018). However, the severe injuries need prompt surgical intervention as they may lead to constant inanition and other secondary complications such as wooden tongue (*Actinobacillus lignieresii*), ptyalism, and dysphagia (Baum *et al.*, 1984; Sadan, 2017). Here, in the present study, the laceration was

not positioned deep rostrally and sever which required amputation as mentioned by Ali *et al.* (2017). Early treatment of the condition leads to a better outcome. For lingual surgery, bleeding during debridement indicates the post-surgery outcome (Dwivedi *et al.*, 2013). Lingual surgery has been reported to be done under sedation with xylazine. The local anaesthetic lignocaine hydrochloride desensitizes the tongue for the surgery, and the tourniquet prolongs the anaesthetic effect in the tongue (Aher *et al.*, 2018). Comparatively, the healing of tongue wounds is faster due to high vascularity of the lingual tissue (Tyagi and Jit, 1993). Feeding of the animal was done only with soft gruel type food including ragi malt, coconut water, chaffed green grass, soaked concentrates, rice gruel (2 litres/100 kg BW/day) (Jena *et al.*, 2017) and plenty of water. On the 10th post-operative day, the wound was found to be healed completely.

Conflict of interest: Authors have no conflict of interest in this study.

ACKNOWLEDGEMENT

Authors are thankful to the people those were present and helped during the time of handling large animal during the course of surgery.

REFERENCES

- Aher VD, Dhage GP, Balage PR and Lokhande DS, 2018. Surgical management of deep lacerated tongue in a red kandhari cow calf. *Int J Vet Sci Anim Husbandry*, 3(2): 14-15
- Ali S, Hamza A, Aslam A, Hussain R, Maan MK *et al.*, 2017. Surgical correction of lacerated tongue in cattle (case study). *Lasbela Univ J Sci Technol*, 6: 47-48
- Baum KH, Shin SJ and Rebhun WC, 1984. Isolation of *Actinobacillus lignieresii* from the enlarged tongue of a horse. *J Am Vet Med Assoc*, 185: 792-793
- Dwivedi DK, Gupta AK, Kushwaha RB, Gupta P and Sharma A, 2013. Surgical repair of traumatic laceration of tongue in a pony. *Indian J Vet Surg*, 34(2): 148-148
- Engelbert TA and Tate Jr LP 1993. Penetrating lingual foreign bodies in three horses. *Cornell Vet*, 83: 31-38
- Jena B, Sahoo S, Mahalik S, Padhan A and Nath S, 2017. Surgical repair of traumatic laceration of tongue in a cow, *J Livest Sci*, 8: 131-133
- O'Connor JJ, 1985. *Dollar's Veterinary Surgery*. 4th edn., CBS publishers and distributors, Delhi, pp 557
- Radostits OM, Gay CC, Hinchcliff KW and Constable PD, 2006. *Veterinary Medicine, A textbook of the Diseases of Cattle, Horses, Sheep, Pigs and Goats*. 10th edn., Saunders, Edinburgh
- Sadan MA, 2017. Surgical treatment of some tongue affections in camels (*Camelus dromedarius*). *J Agric Vet Sci*, 10(1): 19-25
- Tyagi RPS and Singh J, 1993. *Ruminant Surgery, A Textbook of the Surgical Diseases of Cattle, Buffaloes, Camels, Sheep and Goats*. CBS Publishers, New Delhi, pp 187

Received 20.05.21, Accepted – 18.07.2021, Published – 06.09.2021 (Online), 01.12.2021 (print)

Section Editor: Prof. S. K. Nandi, Associate Editor