

SURGICAL RECONSTRUCTION OF TEAT FISTULA IN A BUFFALO

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ABSTRACT

A three-year-old buffalo was presented with a complaint that the left hind teat was hard and swollen since 15 days. On palpation the teat was edematous with a wound on the side of the teat, through which the milk leaked during milking. The condition was diagnosed as teat fistula. Reconstruction of the fistulous tract was performed under 2% Lignocaine HCl using ring block technique. The animal had an uneventful recovery.

Keywords: *Bubalus bubalis*, buffaloes, teat fistula, reconstructive surgery, prosthetic tube

INTRODUCTION

Diseases of teat and udder are common problem in buffaloes and any disease condition involving udder or teat ultimately affects the productivity of the animal and farmer's economy. (Rambabu *et al.*, 2011). Physical damage to the teat may occur due to direct trauma, during suckling by calves or may be a result of internal abnormalities (Tyagi and Singh, 2010). A teat fistula is an abnormal opening or passage on the teat surface

that communicates with the main teat cistern and gland complex through which milk flows out of lactating animals (Schmit *et al.*, 1994; Tyagi and Singh, 2010). It is commonly seen in animals with long teat and pendulous udder (Singh *et al.*, 1993). as buffalo teats are often over used and prone to trauma and injury specially during milking.

CASE HISTORY AND CLINICAL SIGNS

A three-year-old buffalo was presented with a complaint of leakage of milk from the side of left hind teat and had a history of injury to the teat caused by barbed fence wire. Physical examination revealed that the teat was swollen and hard. The fistulous wound was contaminated with soil and dirt and upon milking leakage of milk through the fistulous tract was observed (Figure 1). The milk was normal in appearance and showed negative results for clinical and sub clinical mastitis by Mastrip test.

SURGICAL PROCEDURE

The animal was restrained in lateral recumbency with the affected teat upwards. The

surgical site was prepared for aseptic surgery. Inj. 2% lignocaine hydrochloride was infiltrated in a ring pattern at the base of teat to provide analgesia at the site of operation. Wound was cleaned with povidone iodine and surgical debridement was carried out to freshen the edges of the wound. The reconstruction of the teat fistula was done with vertical mattress suture technique by taking bite through sub mucosal and muscularis layer avoiding the mucosal layer using Nylon (0.4 mm size). The skin was left unsutured due to lack of skin as a result of extensive damage to the skin. A sterilised polythene tube was inserted postoperatively into the teat cistern through the natural teat orifice. Intramammary infusion of antibiotic (Colistin 500000 IU+Cloxacillin 200 mg) was done once a day after complete drainage of residual milk for five days. Inj Amoxicillin and Cloxacillin 10 mg/kg i/v was administered once daily for 5 days, and inj, Meloxicam (0.2 mg/kg i/m) for 3 days to control infection and inflammation of the teat. The dressing of the wound was performed daily using povidone iodine solution followed by silver nitrate ointment application until the wound healed. Figure 2 and 3.

RESULT AND DISCUSSION

The present case was presented with a complaint of hard left hind teat since 15 days having an open lacerated wound with a fistulous tract on teat surface due to injury caused by barbed fence wire. Hendrickson (2007) opined that poor structural housing integrity with sharp edges and wire pieces left standing out will cause lacerations to passing animals.

Singh *et al.* (1993) reported that surgical intervention was required for the deep penetrating

wound of the teat canal and improper closure may lead to teat fistula. In this case delayed presentation of the case could have led to the development of fistula after the injury. Local anaesthesia techniques facilitate surgical repair of lacerated and traumatized tissues of the udder as reported by Steiner and Rots (2003) and Lumb and Jones (1996). In the present case ring block was performed which gave adequate desensitization of the teat for its reconstruction. Robert and Fishwick (2010) opined that suturing of fistulous tract without penetrating the mucosal layer and opposing only muscularis and sub muscularis was helpful in better healing of the teat wound. Similar procedure was followed in the present case. However, as the skin was not adequately available for reconstruction, it was left unsutured and allowed to heal by second intention.

Adequate post-operative antibiotic therapy following the surgery and daily dressing of wound with povidone iodine dips helped in prevention of mastitis and secondary bacterial infection and hastened healing of wound. Placing of prosthetic tube into the teat helped in removal of milk from the udder and it also facilitated in healing of fistulous tract. However postoperatively the tube came out of the teat canal and led to development of fibrous tissue into the teat canal. Though the wound healed completely it failed to let down milk from the teat because of complete blockage all along the teat canal. The retention of prosthetic tube in teat helped in preventing the obliteration of the teat canal. In the present case the teat and udder were saved from further progression and spread of mastitis and trauma.



Figure 1. Showing leakage of milk from teat fistula.

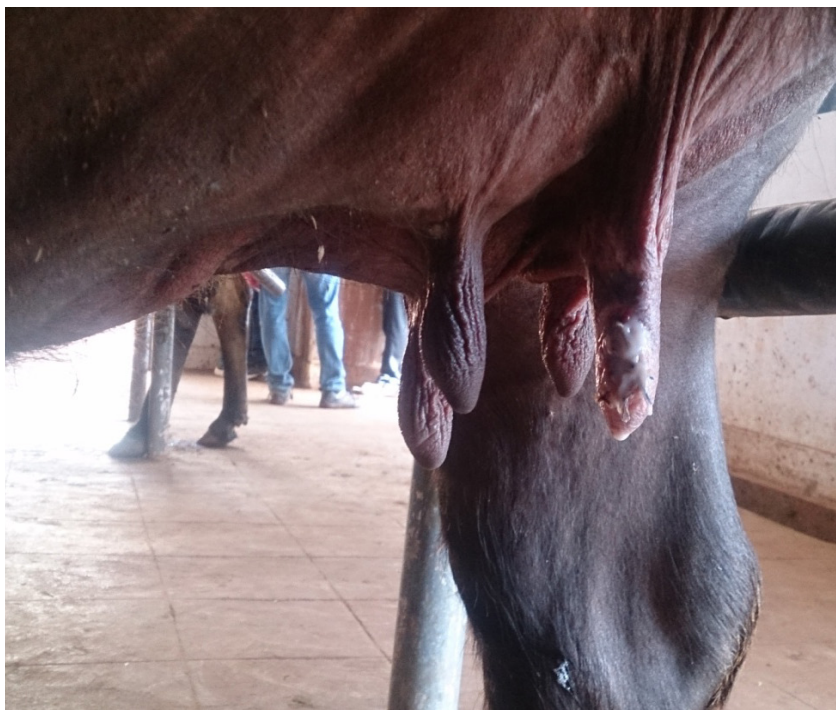


Figure 2. Showing healing of surgical wound.



Figure 3. Showing healed fistulus tract.

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