



Surgical Management of Teat Fistula with Full Thickness Laceration in Osmanabadi Goat: Economic Loss to Farmers

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Abstract

Teat fistula is a condition where there is an abnormal tract connecting the teat cistern to the skin with leakage of milk in lactating animals. Due to the pendulous structure of goat teats, fistula or laceration are extremely common. This paper reports surgical management of teat fistula with full thickness laceration of teat. The four and half years old osmanabadi doe was presented to Referral Veterinary Polyclinic, ICAR, IVRI, Izatnagar. Case was operated under epidural anaesthesia using 2% lignocaine hydrochloride with ring block at base of teat. Teat fistula path was located and sutured, patency was maintained by keeping teat cannula. Lacerated teat was closed in two layers mucosa was closed by simple interrupted pattern whereas muscularis and connective tissue closed in simple continuous pattern as second layer using polyglactin 910. Cannula was fixed by placing sutures. Skin was closed by simple interrupted suture pattern using polyamide. 14 days after surgery cannula and sutures were removed and observed normal milking animal made uneventful recovery.

Introduction

An abnormal tract that connects the teat cistern to the skin and causes milk to flow from lactating animals is known as a teat fistula (Chakrabarti *et al.*, 2014). Due to its unusual anatomical placement and pendulous form, the goat teat is susceptible to damage. Mastitis could develop if the condition is not treated properly or neglected (Singh *et al.*, 2012). Teat fistula may be viewed as an acquired or congenital condition. Full-thickness teat wounds or complications during thelotomy closure are common causes of acquired teat fistulas (George *et al.*, 2008). The condition has a direct impact on the farmer's economic productivity owing to milk leakage and an indirect impact on the growth of the young and the development of mastitis.

The affected animals often avoid milk suckling by the young ones due to discomfort and pain. In turn, this will indirectly affect the growth of young ones. Teat fistula may be regarded as a surgical



emergency. The five layers of the goat's teat are the mucosa, submucosa, highly vascularized connective tissue, muscle, and skin (Abd-El-Hady, 2015).

These situations cause financial loss because milk supply declines, costs rise, and there may be long-term repercussions on the health and productivity of the affected animals. To avoid complications like mastitis, teat necrosis, and the subsequent loss of the afflicted quarter, timely care of teat affections is very essential (Shiju Simon *et al.*, 2010).

The current case report is on successful surgical treatment of traumatic teat fistulation in a Osmanabadi goat.

Case history and clinical examination

The four and half years old osmanabadi doe was presented to Referral Veterinary Polyclinic, ICAR, IVRI, Izatnagar. The case was presented under lactation period with history of lacerated wound on the left teat due to barbed wire with continuous leakage of milk drop by drop. Upon clinical examination body temperature recorded was 101.8°F, respiration was 26/minute and heart rate were 98 beats per minute, all were within physiological limit. Upon palpation slight inflammation of teats was observed and around 3 cm longitudinal laceration of left teat was noticed.

Surgical procedure and management

Anaesthetic protocol: caudal epidural anaesthesia at lumbosacral region along with ring block around left teat using 2% lignocaine hydrochloride (Lumb and Jones, 1996).

The surgical site was prepared aseptically (Fig.1), an infant feeding tube (canula) was inserted to maintain the patency of teat canal (Fig.2) and then surgical debridement of wound edges were made. The fistula path was located and sutured separately using polyglactin 910. The lacerated teat was closed in two layers, first layer was suturing of mucosa with simple interrupted suture pattern (Fig.3), second layer includes muscularis and connective tissue with simple continuous suture pattern using polyglactin 910 (Vicryl) size 2-0 (Fig.4). Lastly skin was closed with simple interrupted suture pattern using non absorbable polyamide size 2-0. Postoperatively broad-spectrum antibiotic ceftriaxone with tazobactam at 25mg/kg body weight IM and analgesics meloxicam at 0.2 mg/kg body weight IM administered for 5 days along with that Pendistrin-SH intra-mammary infusion has to be done twice daily for 5 days and cannula was fixed using stay sutures and adhesive tape. Owner was advice to drain the milk thrice a day by opening knob of cannula. 14 days after surgery complete recovery of animal was reported and no leakage of milk observed. The canula and sutures were removed and uneventful recovery was reported.



Fig.1. Traumatic fistulous teat laceration



Fig.2. Closure of fistulous tract & cannula fixation



Fig.3. Suturing of mucosa layer



Fig.4. Suturing of muscularis with connective tissue

Conclusions

As teat and udder affections have huge impact on the economy and are viewed as an emergency because any delay in treatment might result in mastitis or even necrosis of the teat, surgical affections of the udder and teats are receiving a lot of attention today.

In these situations, prompt surgical intervention is crucial. Teat fistulas, mastitis, necrosis of the teat, and eventual loss of the damaged quarter can all result from failing to treat teat lacerations in a timely manner. Farmers are significantly impacted financially by these illnesses because they lose milk and incur higher medical costs. Therefore, to manage deep traumatic injuries and stop additional losses, early surgical intervention is essential.



Reference

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