

Case Report

**UNILATERAL MASTECTOMY: A RADICAL TREATMENT OF
EXTENSIVELY FIBROSED UDDER IN A GOAT**

Deepesh Gautam^{1*}, Divya Mohan¹, Sowbharenaya C.¹ and A.M. Pawde²

¹PhD Scholars at Division of Surgery, IVRI, Izatnagar, Bareilly (UP)

²Principal Scientist at Division of Surgery, IVRI, Izatnagar, Bareilly (UP)

E-mail: gautamdeepesh87@gmail.com (**Corresponding Author*)

Abstract: A 4 year old goat of 35 kg body weight was presented at IVRI Referral Veterinary Polyclinic with the history of an extensively enlarged left quarter of udder since 1 month after a laceration wound. Animal had difficulty while walking and was lying down most of the time. The animal was being treated for mastitis for last 15 days in medicine unit but no improvement was observed. Laboratory test was negative for any kind of neoplastic tissue. Decision for surgical amputation of the affected udder was taken in the presented case, keeping in mind the extensiveness of the lesion, frequent bleeding from the multiple lacerations and to relieve the discomfort to the goat.

Keywords: Goat, Laceration, Mastitis, Mastectomy, Udder.

Introduction

Radical mastectomy (unilateral or bilateral) is a salvage procedure and indicated in cases of chronic suppurative mastitis, gangrenous mastitis and neoplastic or hyperplastic conditions of the udder (Andreasen *et al.* 1993, El-Maghraby, 2001, Cable *et al.* 2004). Each half of the udder is supplied with external pudendal artery that emerges from the inguinal ring (Hofmeyer, 1990). Each half of the udder is drained by a circular venous plexus derived mainly from the external pudendal vein, subcutaneous abdominal vein and the perineal vein (Kerr and Wallace, 1978). Mastectomy is indicated for treatment of gangrenous mastitis and many other conditions including chronic suppurative mastitis, pendulous udder, chronic obstructive mastitis and irreparable udder injuries (Oehme, 1988). Often the affected udder is enlarged and highly vascularized, making control of hemorrhage problematic during partial mastectomy (Youssef, 1999). Amputation of the affected teat has also been described in association with vascular ligation for mastectomy in cattle (Noordsy, 1999). Unilateral or bilateral mastectomy is recommended as a pain relieving procedure for extensive lesions involving udder and in cases of chronic mastitis, gangrenous lesions or neoplasia (Cable *et al.*, 2004). The present case report describes unilateral mastectomy for the management of incurable extensive fibrosis of udder in a goat.

Case history and observation- A 4 year old goat of 35 kg weight was presented at IVRI Referral Veterinary Polyclinic with the history of an extensively enlarged left quarter of udder since 1 month after a lacerated wound on udder (Fig. 1). History revealed that, the growth was gradually increasing in dimensions. Previously the enlargement was there but subsided partially after medicinal treatment at medicine unit of IVRI polyclinic. The affected (left) teat was dry since 25 days, while right teat was apparently healthy with normal milk production. The overgrown udder was causing problem to the goat while walking. Otherwise, the animal was apparently healthy. Laboratory test was negative for any kind of neoplastic tissue and bacterial infection.

Preoperative treatment- Tetanus toxoid was administered intramuscularly 3 days prior to surgery. Meloxicam (0.5mg/kg) and Ceftriaxone sodium (25 mg/kg) were intravenously administered approximately 1 hour before surgery. Whole udder or surgical site was cleaned, shaved and prepared for aseptic surgery. Clinical examination revealed respiratory rate, heart rate and rectal temperature within normal physiological range.

Surgical treatment- It was decided to perform unilateral mastectomy of the affected quarter of the udder. Animal was kept off feed and withdrawn water for 12 hours. The goat was sedated with 0.1 mg/kg Xylazine hydrochloride, diluted in 20 ml of normal saline and administered intravenously over 5 minutes. The animal was restrained in right lateral recumbency with upper left hind limb made slight dorsal. Inverted L block and circular infiltration of lignocaine hydrochloride 2% around udder was also given. An incision separating the two udders and another incision at the base of the affected udder was given. The affected udder was separated from the healthy udder and the abdominal wall at the base with blunt dissection. The external pudic artery and vein, perineal artery and large subcutaneous vein were isolated and doubly ligated. Forci pressure was used to control subcutaneous haemorrhage. It was repaired using simple continuous sutures with Catgut No. 1. Subcutaneous tissue sutured with Chromic Catgut No. 1 in simple continuous suture pattern and the skin was sutured with Silk in horizontal mattress pattern. Animal recovered within 10 minutes after completion of surgery. Post-operative care included Ceftriaxone (1g, IM, BID) and Meloxicam (3ml, IM, OD) for 7 and 3 days respectively. Anti-septic dressing was advised with povidone iodine solution and fly repellent lorexane cream. Skin suture removal was advised on 12 postoperative day. The exploration of the resected udder revealed extensive fibrosis (Fig. 2).

Result and Discussion- After 15 days, animal was presented to clinic with complete uneventful recovery (Fig. 3). Surgical wound was completely healed and skin sutures were removed. Another teat (right teat) exhibit normal milking. The present case report describes successful surgical management of unilateral mastectomy in a goat under general anesthesia which was presented with a massive hard growth involving left udder since last one month.

References

- [1] Andreasen, C.B., Huber, M.J. and Mattoon, J.S. (1993). Unilateral fibroepithelial hyperplasia of the mammary gland in a goat. *J. Am. Vet. Med. Asso.* 202: 1279-80.
- [2] Cable, C.S., Peery, K. and Fubini, S.L. (2004). Radical mastectomy in 20 ruminants. *Vet. Surg.* 33: 263-66.
- [3] El-Maghraby, H.M. (2001). Comparison of two surgical techniques for mastectomy of goats. *Small Rumin. Res.* 40: 215-21.
- [4] Hofmeyer, C.V. (1990). *Ruminant urogenital surgery*, Iowa State University Press, p. 148-70.
- [5] Kerr, J.H. and Wallace, C.E. (1978). Mastectomy in goat. *VM/SAC* 9: 1177-81.
- [6] Noordsy, J.L. (1989). *Food Animal Surgery*, Veterinary Medicine Publishing Co., Kansas, USA, p. 231-22.
- [7] Oehme, F.W. (1988). *Textbook of Large Animal Surgery*. The Williams and Wilkines Co., Maryland, Baltimore, p. 226-27.
- [8] Youssef, H.A. (1999). Mastectomy as a radical treatment for some prevalent udder affections in goats in Al-Gassem. *Assiut. Vet. Med. J.* 41:181-93.

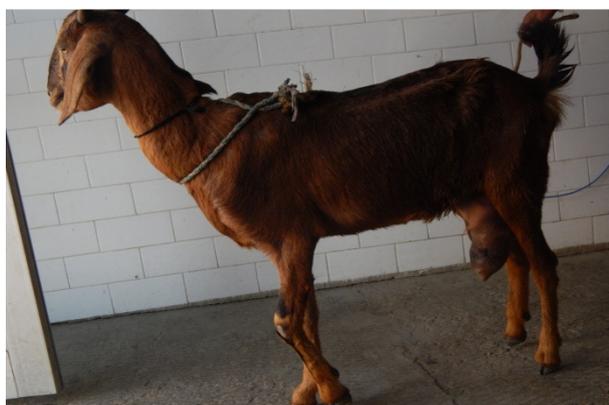


Fig. 1. Photograph showing extensively enlarged left udder



Fig. 2. Photograph showing resected part of udder



Fig. 3. Photograph showing condition of udder after 15 days