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## Surgical management of chronic obstructive mastitis by partial mastectomy in a jamunapari goat

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### Abstract

An adult Jamunapari doe was presented with enlarged and fibrosed teat consequent to chronic, medically unresponsive mastitis and was causing hindrance while walking since one year. Radical mastectomy was performed under xylazine sedation and ring block using lignocaine. With good post-operative care and management the doe recovered uneventfully.

**Keywords:** Jamunapari doe, chronic obstructive mastitis, partial mastectomy

### Introduction

Teats of goats are pendulous and hence commonly affected with lacerated wounds, but less frequently affected with mastitis compared to cattle (Radostits *et al.*, 2006). Mastitis is one such important udder affection that has to be attended with utmost care and proper antibiotic management. *Staphylococcus aureus* was the most common etiological organism of the caprine mastitis (Linklater and Smith, 1983). This condition has to be treated in time with utmost care using suitable antibiotics; else it will become chronic, may not respond to medical treatment and finally culminate in gangrenous or obstructive mastitis (El-Maghraby, 2001) [2] which necessitates radical mastectomy (Ramesh and Anusha, 2017) [8]. Apart from gangrenous mastitis and obstructive mastitis, radical mastectomy was indicated in cases of chronic suppurative mastitis, overhanging and pendulous udder and extensive udder injuries (Oeheme, 1988) [6]. In the present communication, we put forth a successful surgical management of chronic obstructive mastitis in a Jamunapari doe.

### Case history and clinical observations

An 8 year old Jamunapari goat weighing about 40 kg was presented to Dept. of Veterinary Surgery and Radiology, Veterinary College, Hebbal, Bengaluru with history of chronic mastitis, overhanging enlarged teat (Fig. 1) for the last one year. It was treated with antibiotics both locally and parenteral with no success. Clinically the goat was active, with left teat and udder became undemarcated into a single hard, fibrosed and painless mass. The teat was over hanging and almost touching the ground causing hindrance while walking. Teat orifice was completely blocked. The teat sinus region was semi hard to hard and ovoid in shape. As the condition was very chronic and hindering motion of the doe, on request of the owner we had to perform partial radical mastectomy retaining the functional teat intact.

### Treatment and Discussion

The doe was fasted for food and water 12 hours prior to surgery. The udder area was prepared aseptically, sedated with xylazine hydrochloride @0.15mg/kg BW I/M and the area was desensitized by ring block at base of udder using 2% lignocaine hydrochloride. An elliptical incision was made at base of udder and undermined carefully (Fig. 2). The major blood vessels *viz.*, external pudic artery, and vein, perineal artery and subcutaneous abdominal vein were identified and ligated using chromic catgut no. 1 and the udder was resected meticulously (Fig. 3). The wound was closed properly to prevent seroma formation using chromic catgut no. 1 (Fig. 4) and skin sutured using polyamide no. 0 in horizontal mattress pattern. Betadine ointment was applied over wound and protective bandage applied. Post operatively it was administered with inj. ceftriaxone @15mg/kg BW for one week and inj. meloxicam @0.2mg/kg BW for 4 days along with alternate day dressing. Sutures were removed on 12<sup>th</sup> postoperative day and the doe recovered uneventfully.

The resected mammary tissue measured 25 cm long and on opening, found an ovoid greenish

yellow solid mass measuring about 12 cm length was observed completely filling teat sinus (Fig. 5). On cutting, it was semi hard and contained hardened milk, inspissated pus and fibrous tissue. The upper part of the mass was completely hardened with thick fibrous tissue (Fig. 6).

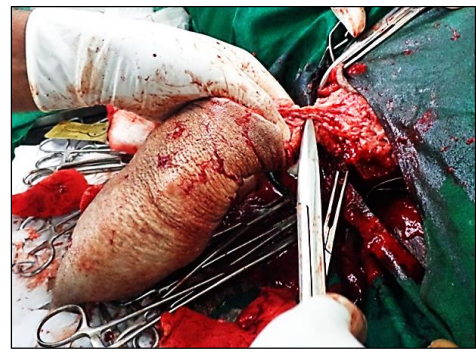
Chronicity in the present case was supposed to be due to improper prolonged treatment of mastitis and negligence of owner that resulted into obstructive fibrosed mastitis. The signs like overhanging udder and teat, hard enlarged teat due to chronic mastitis were also reported by El-Maghraby (2001)<sup>[2]</sup> and Gautam *et al.* (2016)<sup>[3]</sup>. The sedation using xylazine hydrochloride 0.15 mg/ kg BW and ring block using 2% lignocaine hydrochloride helped in carrying out smooth surgical procedure. Monsang *et al.* (2016) performed bilateral radical mastectomy under sedation with triflupromazine hydrochloride @0.2mg/kg BW I/V, maintained with 1:2 mixture of Ketamine and diazepam, while Balagopalan *et al.* (1990)<sup>[1]</sup> used combination of glyceryl guaiacolate ether, triflupromazine and thiopentone to perform partial mastectomy in goats. The important vessels were ligated properly to prevent blood loss and subcutaneous sutures were placed to prevent seroma formation. El-Maghraby (2001)<sup>[2]</sup> compared classical surgical mastectomy with ligation of mammary vessels that lead to ischaemic necrosis and eventual slough off of the affected half. He opined that ligation of vessels could be applicable in cases of wide based udder that has strong attachment with body wall. In the present case, as right half was functional and the affected mammary glands and teat was hanging sufficiently we performed partial radical mastectomy. It is very rare to find an ovoid, semi hard and large lump in the teat sinus on cutting the teat. It is supposed to be formed of milk, pus and fibrin which completely obstructed teat canal and sinus. The thickened tough fibrinous coat could have made the treatment difficult.



**Fig 1:** Photograph showing enlarged fibrosed left teat. Note normal right teat.



**Fig 2:** Photograph showing elliptical incision at base of udder.



**Fig 3:** Photograph showing careful resection of the mass.



**Fig 4:** Photograph showing subcutaneous suturing.



**Fig 5:** Photograph showing ovoid solid mass in teat sinus and hard fibrous teat tissue



**Fig 6:** Photograph showing cut opened ovoid mass composed of hardened milk, inspissated pus and fibrinous tissue.

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