

Short Communication

UNILATERAL MASTECTOMY FOR MANAGEMENT OF GANGRENOUS MASTITIS IN A DOE: CASE REPORT

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ABSTRACT: A crossbred black Bengal goat was presented to Additional Block Animal Health Centre, Bhabta Beldanga, Murshidabad, West Bengal, India. with blackish necrotic right udder and reddish purulent secretion during milking. Depending on clinical symptoms it was diagnosed as gangrenous mastitis. Conservative therapy in gangrenous mastitis in goats is mostly unfavorable. Present case was successfully managed with unilateral mastectomy and other post-operative treatment. The animal recovered uneventfully.

Key words: Unilateral mastectomy, Gangrenous mastitis, Doe.

Mastitis refers to inflammation of mammary gland characterized by physical, chemical, usually bacteriological changes in the milk and pathological changes in udder. Organism infecting udder of goats is similar in cows. Coagulase negative staphylococci are generally most prevalent (Erskine 2016). In severe cases the infection may progress to gangrene characterized by necrosis, reddish-black discoloration, dark red secretion from teat and systemic signs of toxemia. Prognosis of the gangrenous mastitis with antibiotics and supportive therapy is mostly unfavorable (Amaravathi *et al.* 2016). Mastectomy is alternative option to save the animal with partial or complete loss of milk production (Sarkar *et al.* 2015).

Case history and diagnosis

A crossbred black Bengal goat aged about 4 years weighted 20 kg thrice kidded was presented to Additional Block Animal Health Centre, Bhabta, Murshidabad, West Bengal, India with history of inappetence, fever, blackish discoloration of right udder (Fig. 1), reluctance to walk. The goat had undergone parturition of live fetus 10 days prior to presentation. On clinical examination affected right quarter was cold to touch with signs of necrosis and reddish purulent secretion was coming during milking of ipsilateral quarter. So, on the basis of clinical examination this was diagnosed as case of a gangrenous

mastitis.

Treatment

Initially the animal was treated with Inj. Meloxicam (5 mg/ml) 1 ml I/M and broad-spectrum antibiotics (Inj. Amoxicillin and Cloxacillin 500 mg) for twice daily I/M for 5 days but the condition of the animal did not improve. Then decision of unilateral mastectomy was opted.

The animal was restrained physically for local infiltration of operative site with Inj. 2% lidocaine hydrochloride (Indoco Remedies, Mumbai) (24.64 mg/ml) @ 4.5 mg/kg followed by sedated with Inj. diazepam (Ranbaxy, Gurgaon) @ 0.5 mg/kg I/V. Peri-operatively the animal was kept under intravenous fluid (Ringer's Lactate). An elliptical skin incision was made at the superiolateral aspect of the gland above the necrotic zone about 2-3 cm away from the intramammary groove. Then the glandular tunic was separated from abdominal tunic and body wall through blunt dissection. Superficial caudal epigastric vessels, external pudendal and perineal blood vessels were doubly ligated with No. 0 chromic catgut. After proper ligation of vessels, the gland was removed. Then subcutaneous dead space was thoroughly closed with No 1 chromic cat gut in continuous pattern (Singh *et al.* 2010) (Fig. 2 and Fig. 3). Skin suturing was done with nylon. Inj. Flunixin Meglumine (50 mg/ml) @ 2.2 mg/kg I/M daily for 3 days, Inj. Cetriaxone 500mg +

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Fig. 1. Gangrenous mastitis of right quarter.



Fig. 2. Condition of operation site after operation.



Fig. 3. Excised mammary gland.

Tazobactam 62.5 mg combination daily I/M (Tiwari *et al.* 2009) for 7 days and fluid therapy with Ringer's Lactate @ 150 ml/ day for 3 days were administered. The wound line was regularly drained and dressed. Skin sutures were removed on 12th post-operative day.

Radical mastectomy (unilateral or bilateral) of mammary gland may be indicated to salvage the animal following development of gangrenous mastitis in goats (Singh *et al.* 2010). Diazepam produces good analgesia and muscle relaxation in goats after intravenous administration @ 0.5 mg/kg which was optimum for mastectomy in this case (Kumar 2010). Higher dose of lidocaine hydrochloride may cause toxicity in goats so, lidocaine was used in lower dose rate for local infiltration of surgical field (Taylor 1991). Ceftriaxone and tazobactam combination was effective to control infections which can be corroborate with the findings of Jeph *et al.* (2013). Flunixin meglumine was used as anti-inflammatory drug as well as to control endotoxemia (Steiner and Ness 2016). Surgical and post-operative protocol opted for this case hastened the recovery but post-operative milk yield of the animal dropped.

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