Surgical Management of Gangrenous Mastitis in a Pregnant Goat

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Introduction
Inflammation of the mammary gland/udder may theoretically be caused by trauma of various kinds but far the most common causes are the infectious agents. All domestic animals suffer from this condition. In severe cases of mastitis caused by virulent strains of organisms, thrombosis of the mammary vessels occur resulting in infarction and gangrene. Staphylococcus aureus and E. coli with Clostridium welchii produce this condition (Sastry, 2001). Gangrene of mammary gland is observed following acute mastitis. It is usually the wet gangrene which occurs in mammary gland and or other organ systems where the fluid content is more and evaporation is very little (lungs, intestines, uterus and mammary gland). Conditions of warmth and high moisture favor rapid multiplication of saprophytic and putrefactive organisms in the dead tissue (Chauhan, 1997).

History and Clinical Examination
A 14 year old, 3 months pregnant crossbred goat was brought to the College Hospital with a history of enlarged right quarter of the udder since three months. During this period the animal was treated with various antibiotics for which it has not responded.

On clinical examination, the right mammary gland was necrotic and distended with exudates and milky substance. The gland was touching the ground and was being dragged around while the animal was walking. It was tentatively diagnosed as gangrenous mastitis and planned for the mammectomy of the affected quarter.

Surgical Treatment: The animal was restrained and local infiltration anesthesia was done using 2% lignocaine HCl. The affected area was prepared aseptically and the right quarter of the udder was excised (mammectomy).

Post-operatively 1g of streptopenicillin was given IM once a day for 5 days and the wound was dressed with Povidone iodine ointment. Goat recovered and had a normal parturition.

Results and Discussion
Examination of the tissue revealed sero-purulent exudate in the acini and interlobular septa. Alveolar exudates contained desquamated epithelial cells and leucocytes. This confirmed the condition of gangrenous mastitis.

Cases of gangrenous mastitis are less reported in goats. Chauhan (1997), reported that it occurs more frequently in ewes, which suffer a severe unilateral attack of staphylococcal mastitis and is referred to as ‘blue bag’. There was no recurrence of the growth after few days of excision and the animal delivered normally.

References
Mastitis in Goats

Also known as Udder inflammation, mastitis is the term used to describe inflammation of the mammary glands, which may be caused by a number of different micro-organisms, mostly bacteria, but also viruses (e.g., although of particular importance in dairy goats, mastitis can develop in any type and breed of doe regardless of its milk yield (Harwood, 2006). Early signs of mastitis include a drop in milk yield, modified milk texture, color, smell and/or taste, lameness, and/or misshapen udders. Although sporadic, clinical mastitis caused by S. aureus may result in gangrenous mastitis, characterized by necrotic udder tissue which will eventually cause the udder to fall off, and the animal will die. Gangrene of mammary gland is observed following acute mastitis. It is usually the wet gangrene which occurs in mammary gland and or other organ systems where the fluid content is more and evaporation is very little (lungs, intestines, uterus and mammary gland). Conditions of warmth and high moisture favor rapid multiplication of saprophytic and putrefactive organisms in the dead tissue (Chauhan, 1997).

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