

THERAPEUTIC MANAGEMENT OF PERIPARTURIENT UDDER EDEMA IN JAFFRABADI BUFFALOES AND GIR COWS

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INTRODUCTION

Udder edema is generally a periparturient disorder characterized by excessive accumulation of fluids in the intercellular tissue spaces of the mammary gland. Incidence and severity are greater in pregnant heifers than in cows (Erb and Grohn, 1988). Udder edema can be a major discomfort to the buffalo and cow and causes management problems such as difficulty with milking, increased risk for teat and udder injuries, and mastitis, and may also reduce milk production. The present study deals with clinical manifestation and therapeutic management of periparturient udder edema in Jaffrabadi buffaloes and Gir cows.

Keywords: Jaffrabadi buffaloes, Gir cows, therapeutic management, udder edema

CASE HISTORY AND OBSERVATION

Post parturient udder edema

Two Jaffrabadi buffaloes and three Gir cows in between their first and third lactations were presented at the Cattle Breeding Farm, J.A.U., Junagadh with swelling of the udder and teats and with the history of calving in the previous week. The edema involved all the quarters, and the animals showed discomfort. Few animals showed painful condition. On palpation, edematous area

and swelling showed pitting on pressure. Clinical examination revealed normal rectal temperature, respiration rates and feeding and watering. The potency of teats was normal in all the buffaloes and cows. In all the animals, milk from each quarter had no abnormal colour and had normal consistency and normal pH ranging from 6.4 to 6.7. The edematous swelling of udder in one buffalo was very severe and extended up to the navel causing severe discomfort to the buffalo and even difficulty in walking; the animal was partially off-feed.

Pre partum udder edema

The two Jaffrabadi buffaloes and four Gir cows in their 1st and 2nd lactation were treated at same farm having history of sever edematous swelling of udder and teat. The swelling of udder was so greatly enlarged in a few of these animals leading to severe discomfort and even to difficulty in walking. The animals were due for calving within week.

THERAPEUTIC MANAGEMENT

Post parturient udder edema

The animals showing signs of post partum edematous swelling were milked thrice a day and treated with diuretics (Frusemide) 1-2 mg/kg of body weight i/m, an antihistaminic (Chlorpheniramine maleate) 10 ml i/m and an

anti-inflammatory (Ketoprofen) 3 mg/kg of body weight i/m. One buffalo with extensive edematous swelling at the navel was additionally given Inj. Vit. B-Complex with liver extract 10 ml and hot fomentation of udder. All the animals successfully recovered within 3-5 days of treatment without affecting milk composition or milk production.

Pre partum udder edema

The animals with severe edematous udder swelling were milked by few striping twice a day to reduce the teat and udder tension. All the affected buffaloes and cows were treated the same as in post-partum udder edema. All the animals successfully recovered within 3-5 days of treatment and had normal parturition and milk production.

RESULT AND DISCUSSION

Udder edema begins shortly before calving when blood flow increases to the udder in

preparation for lactation. It is normal for most cows to experience some degree of udder edema before calving. Under normal conditions, the edema will clear from the udder within a week or two post-calving. Physiologically, a developing calf can restrict the flow of blood and lymph away from the udder while at the same time metabolic changes, especially hormonal fluctuations, cause an increased blood supply to the area. This combination can lead to the excessive pooling of fluid (Merck's Veterinary Manual).

The clinical manifestation recorded in the present study agree with those reported by Sharma *et al.* (2005). Dentine and McDaniel (1983) also observed that udder edema is more severe in heifers than cows.

The treatment with diuretics, antihistaminic and anti-inflammatory were help in draining out excessive accumulation of interstitial fluid, reducing histamine release and reducing swelling of udder and relieving pain respectively. Treatment includes massages and hot compresses on the



Figure1. Primiparous cow heifer showing udder edema extentened up to nevel.

affected areas. This stimulates blood flow, which aids in the removal of the excess fluid.

Factors like prepartum heavy grain feeding to heifers (Dentine and McDaniel, 1983) and high sodium and potassium intake in housed cattle might be predisposing factors for the udder edema. Malven *et al.* (1983) concluded that prepartum edema was positive for plasma estrone and estradiole-17a and was negative for estradiole 17b and progesterone.

Udder edema is frequently seen in primiparous cows. This could be due to the immaturity in the vascular structure of the udder being more vulnerable to fluid retention. Heredity also may play a part increasing the susceptibility of the cow to udder edema (Merck's Veterinary Manual).

Udder edema does not seem to be caused by just one factor but rather a combination of factors; genetic predisposition, management and nutrition, large foetus size, heavy concentrate feeding and incomplete developed mammary vein may be responsible for severe udder edema in the buffaloes and cows. Prevention through proper nutrition is the easiest route, but treatment is successful in controlling this condition.

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