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Therapeutic management of post-parturient udder edema in a cow

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Abstract

Udder edema is a clinical condition characterised by accumulation of fluid in the interstitial tissue of mammary gland, sometimes extending upto sternal region. Several factors play role as predisposing factors in the causation of the disease. Most cases are resolved without treatment, but severe case need therapeutic intervention as it not only interfer milk production but also lead to mastitis. The present case report documents a case of udder edema in a cow and its therapeutic management.

Keywords: Udder, edema, sternal, mastitis

Introduction

Udder edema is a clinical condition characterized by excessive accumulation of fluid in the interstitial tissue of mammary gland. It affects all cows but with more susceptibility towards the cows with higher production potential and pendulous udder. First calved heifers are usually affected more because of immaturity of vascular structure of mammary tissue. It has economic importance due to decreased milk production either due to pain or inconvenience in milking of edematous udder. Prolongation of the condition may lead to the damage of suspensory ligament and udder tissue. The exact etiology is unknown, but, studies have shown that it might be due decreased blood flow to mammary tissue associated with an increase in venous blood pressure in the cranial superficial epigastric veins. (Al Ani *et al.* 1985, Al Ani and Vestweber 1986) ^[1, 2]. Several factors are associated in predisposition of this condition. The severe cases need therapeutic intervention to prevent milk loss and upcoming mastitis. The present study reports a case of udder edema in a jersey cows and its successful therapeutic management.

Case history and clinical examination

A Jersey cows was attended by the author as per call of the owner. The owner reported that the cow had delivered 3 days back and swelling started from yesterday. On clinical examination, severe swelling was observed on udder with pitting on pressure. There was no hardness felt on palpation of the udder. The swelling was extending upto naval region. The animal was looking in a discomfort state but, the vitals were normal. The teat potency was normal and milk from each quarter were normal in colour in consistency. The p^H was also found normal ^[6, 7]. Based on the history and clinical findings, the case was diagnosed as post parturient udder edema.



Fig 1: Edema of udder extending up-to naval region

Treatment and discussion

Symptomatically, the case was treated with frusemide@2 mg per kg IV daily for 2 days, chlorpheniramine maleate @ 12 ml IM daily for 3 days and serratiopeptidase bolus@ 2 boli orally daily for 5 days. Messaging of udder was advised two time daily until recovery. The owner was advised to restrict the salt in the diet for 1 week. The cow recovered 48 hours after initiation of treatment. It is considered physiological to experience some degrees of udder edema before calving in cows with high production potential. Shortly before calving blood flow increases to udder by many folds as a preparation for lactation. Obesity, lack of exercise in stall fed animal, parturient diet high in salt etc factors predispose to the development of this condition. As in this case, the edema was painful and causing inconveniences in milking, hence treatment was advised. Regular massage stimulates circulation and thus promote edema reduction. Diuretics have a role in draining out the excess fluid deposited in the interstitial tissue of mammary gland. Seratiopeptidase have a role in reducing the swelling and pain therewith. Chlorpheniramine maleate controls the histamine release thus aiding in alleviating the inflammation and associated discomfort to the cow (Merc Veterinary Manual, Ghodasara *et al.*, 2012)^[3]. Udder edema is most common in primiparous cow which might be associated with the immaturity of udder vasculature that's retains more fluid. Hereditary is another influential factor of udder edema in cow (Merck Veterinary manual).

It is mostly a physiological condition. But, combination of multiple factors like hereditary influence, udder structure, high concentrate and salt in diet, obesity, lack of exercise leads to the development of severe form of udder edema. Interventions in this aspect will be helpful in preventing the occurrence. However, the condition can be managed well through therapeutic intervention also.

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