

SURGICAL MANAGEMENT OF RECURRENT TYMPANY DUE TO OBSTRUCTION OF RETICULO-OMASAL ORIFICE BY PHYTOBEZOARS IN A HF COW

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Abstract: An adult pluriparous HF cow in its advanced pregnancy was presented to clinic with signs of recurrent bloat, anorexia, mild regurgitation from nostrils and dyspnoea. Based on the anamnesis and signs it was suspected as foreign body syndrome and an emergency left flank laparo-rumenotomy was performed and retrieved 6 phytobezoars of varying sizes that blocked the reticulo-omasal orifice which prevented normal flow of ingesta. With good post operative care and management, animal recovered uneventfully.

Keywords: Cattle, recurrent tympany, rumenotomy, reticulo-omasal orifice, phytobezoars.

INTRODUCTION

Bloat is accumulation of gas in rumen and it may be primary or secondary. Primary bloat is due to feeding of alfalfa hay and clover. Secondary bloat and recurrent tympany is due to obstruction to eructation process (oesophageal obstruction, vagal indigestion) or due to blockage of rumeno-reticular outflow (diaphragmatic hernia, trichobezoars, phytobezoars, plastic impaction, TRP, etc.) (Singh *et al.*, 2006). A phytobezoar is type of hard trapped mass or concretions found in the gastrointestinal system that consists of components of indigestible plant material, such as fibres, skins and seeds. Phytobezoars usually lie on the rumen floor or trapped in reticular honey comb pattern and rarely necessitates surgical intervention. Depending on the extent of obstruction to rumeno-reticular outflow, the signs may range from recurrent bloat to life threatening severe bloat that requires emergency trocarization. Diagnosis of this condition could be possible only by exploratory laparotomy.

CASE HISTORY AND CLINICAL OBSERVATIONS

A 9 year old HF cow in its 7th month of pregnancy was presented to Dept. of Veterinary Surgery and Radiology, Veterinary College, Hebbal, Bengaluru with signs of recurrent tympany since 2 months. History also revealed that, bloat could be relieved earlier by using anti bloat agents and laxatives, but now it necessitated rumen trocarization. It also

showed signs of dehydration, sunken eye balls, dyspnoea, occasional grunting, anorexia and mild regurgitation through nostrils, black, pasty and scanty faeces. All physiological parameters were within normal physiological range (temperature @ 102.2⁰F, heart rate @ 70 beats/ min, respiratory rate @ 24/ min and conjunctival mucous membrane pale pink). An emergency exploratory rumenotomy was planned and executed.

RESULTS AND DISCUSSION

The animal was preoperatively administered with RL 5lt, DNS 5lt, ceftriaxone 3g and meloxicam I/V. Left flank area was prepared aseptically and regional anaesthesia was achieved by using proximal paravertebral nerve block by injecting 2% lignocaine. With a 15 cm linear incision over skin, muscles and peritoneum, the rumen was exteriorized. Margins of rumen were sutured to skin edges to prevent spillage of rumen contents into peritoneum. Linear incision was made over rumen and held with Babcock's forceps. 2/3^{rds} of the impacted contents were removed. 6 phytobezoars of sizes varying from 2"x3" to 6.5"x4" found blocking reticulo-omasal orifice were retrieved (Fig 1). Fresh rumen cud was transplanted into rumen along with Provisacc bolus and sugar. Rumen, muscles and skin were closed routinely. Post operatively the above therapeutic regime was followed for next 5 days.

Tympany may be primary or secondary; and in the present case it was secondary due to blockage of rumeno-reticular outflow by phytobezoars. Phytobezoars are formed mostly in reticulum or on floor of rumen and many times they were non-symptomatic (Raidurg, 2010). But may pose serious problem as the size and number increases as in the present case. Phytobezoars were also retrieved from abomasum (Tschuor *et al.*, 2010) and small intestines (Hasunuma *et al.*, 2011) by conducting emergency abomasotomy and enterotomy respectively. In large ruminants, because of the capacious fore stomachs, phytobezoars usually may not be pathogenic but in small ruminants like sheep they lead to death also (Azizi *et al.*, 2009). Recurrent tympany was the most prominent sign in the present case which was also the most common sign observed in diaphragmatic hernia (Salunke *et al.*, 2010), reticular abscess (Athar *et al.*, 2010), omental/ splenic/ hepatic cysts (Singh *et al.*, 2006) and traumatic reticuloperitonitis (Abdelal *et al.*, 2009), hence further studies has to be done to diagnose phytobezoars. The other signs of recurrent bloat, abdominal distension, dyspnoea seen in this case were also reported by Alhamed *et al.* (2015). Each phytobezoar retrieved was composed mostly of grass and little quantity of plastic bags and threads that concretely formed into a ball like structure which might also aided by ruminal and reticular movements.

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Fig 1: Photograph showing the trichobezoars retrieved during rumenotomy

