

Acute Tympany and Death in a 27 Days Old Calf Caused by Trichobezoar

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Abstract: A 27-day old, female Holstein calf was died immediately after the intake of colostrums with acute tympany and hypersalivation. Calf was subjected for post-mortem examination and revealed oval shaped trichobezoar at the pylorus of the stomach.

Keywords: Calf, tympany, trichobezoar

1. Introduction

A bezoar is a mass found trapped in the gastrointestinal tract usually in the stomach. According to its content, there are several types of bezoar, including; lactobezoar, pharmacobezoars, phytobezoars, diospyrobezoar and trichobezoar containing inspissated milk, masses of drugs, indigestible plants, unripe persimmons and hair, respectively (Hasunuma *et al.*, 2011). Trichobezoars were formed after ingestion of hair and were sometimes covered by a deposit of inorganic salts. The surface of hairball was uneven and present as sharp projection. (Mesaric and Modic, 2007). Trichobezoars were round or oval masses that formed by animal licking themselves or each other and one of the other cause was Nutrition with deficiency of phosphorous, iron, sodium and magnesium. (catiket *et al.*, 2015). Ruminant trichobezoars have been reported in cows and common in calves (schweizer *et al.*, 2005). The prevalence of hairball in the young calves was 57.7% (murray *et al.*, 2005). In ruminants they occurs in forestomachs and abomasums and they may obstruct the pylorus rarely cause problem in the intestine. (Mesaric and Modic, 2007). Radiography can be helpful in establishing a diagnosis. Clinical signs include anorexia, depression, dehydration, ruminant tympany, abomasal displacement, intermittent respiratory distress in calves. Recurrent ruminant tympany is a common sign in dairy buffaloes caused by several affections and resulted in severe economic losses (Ashraf *et al.*, 2014). The aim of the present study was to report diagnosis and results after postmortem examination of calf suffering from recurrent rumen tympany caused by trichobezoars.

2. Materials and Methods

A 27-day old, female Holstein calf was died immediately after the colostrum intake was approximately 4 liters with acute tympany and hypersalivation in akshayakalpa dairy farm. A detailed post-mortem examination revealed oval shaped hair ball (fig-1) around 7 cm length at the pylorus and approximately 7-8 liters of frothy milk and small hairs in stomach was (fig-2) noticed.



Figure 1: Post-mortem examination revealed oval shaped trichobezoar



Figure 2: Picture showing 7-8 liters of frothy milk and small hairs mixture in abdomen

3. Results and Discussion

Trichobezoars were round masses that they form by animals licking themselves or each other. One of the other causes of the trichobezoar formation was nutrition with mineral deficiency (Brookset *et al.*, 1984). The calf breast sucking, instead of drinking milk with bottle, was liable to hair ingestion. Particularly in cold climates, due to shaggy hair

coat, licking each other in calves is the main cause of the hair ingestion resulting in the trichobezoar formation (Jelinski *et al.*, 1996). In ruminants they occur in the forestomachs and abomasum. They may obstruct the pylorus, but rarely cause problems in the intestine. They are much lighter than true enteroliths. Bezoars in animals were usually not significant until they completely obstruct the gut. They may act like a ball valve to the opening of a narrow portion of the intestine (Radostits *et al.*, 1990). In present study, Necropsy was performed immediately after death of calf. In necropsy, left flank is distended. White frothy discharge in mouth and vaginal bleeding was noticed. The rumen and abomasum were bigger than its normal size. Following the incision of the abomasum, an oval-shaped hairball (7 cm in diameter) occluding to the pylorus abomasum was encountered. Approximately 7-8 liters of frothy milk and small hairs inside was noticed. Furthermore, consistency of the other bowel segments was soft and there was no other pathological condition encountered in small and large intestines. The parenchyma organs (liver, kidney and spleen) of the abdomen had not any abnormality, as well. In milk feeding calves there are several vices like licking, sucking, tail biting, suckling the rudimentary teats, soil eating etc due to the mineral deficiency (Brook *et al.*, 1984). In Akshayakalpa heifer unit, group feeding of calves in buckets was practiced. The calves had vice to lick the mouth and milk coated cheek of other calves immediately after feeding milk. So many hairs enter into the rumen and abomasum due to rumen-abomasum motility; hairs were accumulating each other and form the trichobezoar. Day by day the size of trichobezoar is increase after few days that trichobezoar was completely blocked the pylorus of abomasum. (Mesaric and Modic, 2007). Digesta was not passed to the intestine; intestines are empty and filled with hair. Calf drink the milk unable to pass through the pyloric splinter abomasum blocked due to trichobezoar. Milk is left over in abomasum and rumen mixed with hairs develop acute frothy bloat.

4. Conclusion

Calf required balanced nutrition in diet and deficiency of the nutrition i.e. mainly vitamins and minerals causes vices and in turn leads formation of Trichobezoars. Finally affects the calf life and economic status of farmer.

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