Case Report

Occlusion of Small Intestine caused by Trichobezoars (Hair Balls) in Sahiwal Calves-A Case Study

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Abstract

The present investigation highlighted the cause of mortality in Sahiwal calves reared at Regional Research and Training Centre, Kaljharani, Bathinda, Punjab. Calves manifested the signs of gastrointestinal occlusion and ruminal tympany and were kept under regular monitoring, but calves died following each other in quick succession. The detailed necropsy revealed the presence of Trichobezoars or hair balls at the abomasal-pylorus junction in Sahiwal calves that occluded the small intestine.

Key words: Calves, Sahiwal, Small Intestine, Trichobezoars

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Introduction

Calf mortality is the most severe problem for dairy industry accounting to be 71.01%. Amongst different etiologies of calf mortality, Hossain *et al.* (2014) revealed 3.35% calf mortalities due to Trichobezoars, being highest (64.41%) in female calves. Mesaric and Modic (2007) and Catik *et al.* (2015) defined trichobezoars as round masses formed due to ingested hairs that have uneven surface with sharp projections. They are formed due to calf licking themselves and nutritional deficiency of minerals like phosphorous, iron, sodium and magnesium as stated by Thomsen *et al.* (2006). Thus, ingestion of hair balls results loss to future farm economy and cost of replacement. Therefore, the present investigation was carried out to determine the cause of death of Sahiwal calves at farm, who were exhibiting signs similar to gastrointestinal occlusion.

Case History and Clinical Examination

As per history, 2 three months female and 1 four months old male Sahiwal calves were anorectic from last 4-5 days with history of self-licking. Initially bloody diarrhea was observed but later no stools were passed. No milk suckling was observed in these calves later. Clinical examination revealed emaciation, dehydration, depression and ruminal tympany. However, no ticks were seen in these calves. One female calf also had respiratory discomfort.

Diagnosis and Treatment

Following history and clinical examination, calves were treated with Inj. Amoxycillin (500 mg twice a day) for 5 days and Meloxicam (3 ml once a day) for 3 days intramuscularly along with Magnesium sulphate (50 gm once a day) for 2 days orally as laxatives. Inj. DNS @ 500 ml per day I/V was also given. But calves died following treatment. Thus post mortem was conducted to ascertain the cause of death in calves. The rumen and abomasum were bigger than its normal size. Following the incision of the abomasum, 3-4 oval-shaped hairballs, largest being 4 cm in diameter (Fig. 1a and 1b) occluding at the pylorus junction were encountered with few hairs and curdled milk (Fig.2). Hemorrhages were present in the small intestine along with some dry faeces. The intestinal mucosa was hyperemic and lumen was distended with gas.

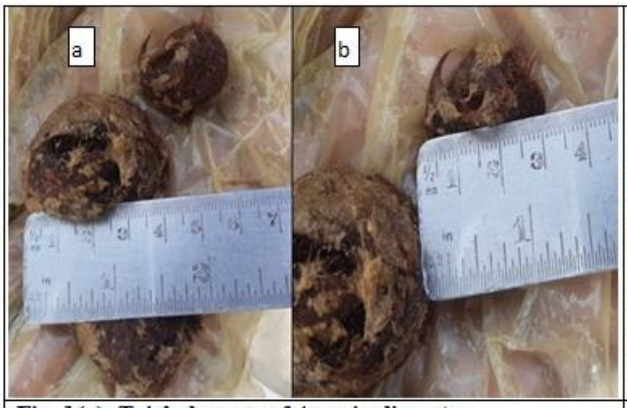

Fig. 1(a). Trichobezoar of 4 cm in diameter
Fig. 1(b). Trichobezoar of 3 cm in diameter

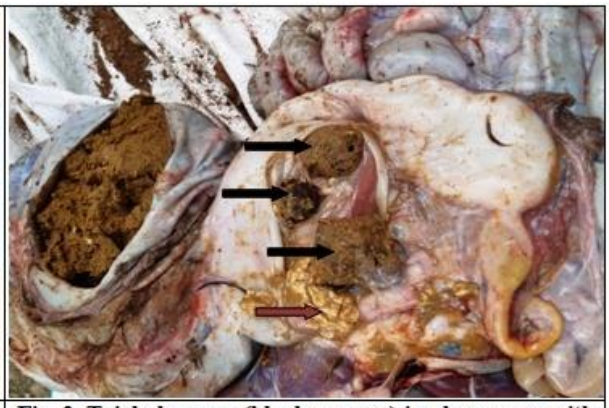

Fig. 2. Trichobezoars (black arrows) in abomasum with curdled milk (red arrow)

Discussion

Trichobezoars in calves originates from ingestion of hairs due to immoderate licking and itchy skin conditions as observed by Sameeh and Jonathan (2006). The owner usually reports problem of decreased or absent fecal output, anorexia, abdominal distension and signs of abdominal pain. Similarly, as our study, trichobezoars associated with ruminal tympany and intestinal hemorrhages had been observed in calves in past by Abutarbush and Naylor (2006). In the present study due to hair balls occlusion at abomasal-pyloric junction, fermentation gases produced were accumulated in abomasum and rumen resulting into ruminal tympany. In the present investigation also, respiratory distress in one female calf could be due to

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accumulated gas as also previously reported by Schweizer *et al.* (2005) and Pasha *et al.* (2018). This results to calf mortality if not managed at the right time. In conclusion, it can be said that though occlusion of the small intestine by a trichobezoar is not commonly observed, but calves showing signs of intestinal occlusion and ruminal tympany must be ruled out properly for the presence of hair balls.

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