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A case report: Presence of trichobezoars in a Sirohi kid

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Abstract

A fresh carcass of a kid with a history of anorexia and weight loss was brought to the Department of Veterinary Pathology, for post mortem. On postmortem examination of the carcass, three trichobezoar of different sizes were found in the rumen. Trichobezoar are liths formed by indigestible foreign particles such as body hair. Bezoars usually do not cause any harm unless they become large enough to obstruct the normal functioning of the rumen, due to which, ruminal content may not be able to pass to the next digestive compartment. In the present case study, the clinical history of inappetency and inactivity together with the presence of hairballs along with bloat and impaction at post mortem examination aptly suggested subsequent toxemia and death.

Keywords: Anorexia, kid, impaction, toxemia, trichobezoars

Introduction

Goat plays a crucial role in the socio-economic life of rural Indians farmers, where they provide food security and income sources. These small ruminants have not only supported the goat owners economically but have also met the rising demand of animal products from the elite urban class.

Bezoars are retained concretions of undigested foreign substances, which accumulate and are found within the gastrointestinal tract, most commonly in the stomach [1, 2]. Trichobezoar is a mass formed by accumulation of hair and is considered to be of rare incidence. The bezoars may be Trichobezoars (composed of hair) or Phytobezoar (composed of vegetable fibers and plant materials). While hairballs are compact or firm masses of hair found in the lumen of gastro-intestinal tract in young bovine, sheep and goat.

Trichobezoars are usually found in young animals, where the affected animals often remains asymptomatic or may sometime exhibit nonspecific gastrointestinal symptoms which rarely arise the suspicion of the presence of trichobezoars. It occurs due to ingestion of excessive amount of body hair either by licking or biting, induced by several factors like presence of ecto-parasite, deficiency of protein and minerals. Formation of hair ball in the GIT eventually may lead to obstruction in the proper functioning of the GIT, resulting in indigestion, impaction and also death if the hair ball or trichobezoars are of considerable size. Death usually occurs due to obstruction of the narrower segments of the GIT resulting in subsequent impaction and toxemia. Affected kid may also show anorexia, weight loss, indigestion, weakness and compromised nutritional status due to early satiety and vomiting [3].

Case report

A carcass of a male Sirohi breed kid of five months was found dead in the organized goat farm, Livestock Farm complex, Apollo College of Veterinary Medicine, Jaipur. The carcass was sent to the Department of Veterinary Pathology, where a detailed post-mortem examination was conducted. The clinical history of the dead kid consists of anorexia and weight loss¹. As per the history and the verbal account of the farm attendant, the kid showed no interest in feed for about 3 weeks.

Gradually the health condition of the kid started to deteriorate, but no sign of diarrhea or any other abnormalities were seen, so symptomatic treatment was given. But on the following day of treatment the condition of animal became worse and the kid showed severe respiratory distress, recumbancy and eventually died.

The clinical examination report of the kid during its living state revealed normal physiological parameters i.e., respiration rate, heart rate and rectal temperature. However, the kid showed

signs of anorexia, bloating (fig. 1), dysphagia emaciation, dehydration, and halitosis. Incidences of recurrent bloat accompanied by abdomen pain, decreased or absent rumen motility, scanty faeces and slight distension of the abdomen at para-lumbar fossa was also recorded. Upon enquiring about the health and behavior of other animals in the same flock, it was revealed that some of the animal exhibited alopecia with repeated biting of hair from other goat or their own bodies.

Results and Discussion

A thorough post-mortem examination was conducted on the carcass. The entire external body surface was examined but no abnormal secretion, excretion or lesion was found in the conjunctiva, nose, muzzle and interdigital space. The carcass was opened systematically. Upon opening the thoracic cavity, the lungs were found to be atelectatic in some areas along with emphysema in some areas correlating dyspnea of the kid. No significant changes was recorded in the heart. Upon opening the abdominal cavity the different parts of stomach was opened and examined. The rumen contained three large round hard balls, varying in size ranging from 3 to 5cm in diameter in the rumen² (figures 3 and 4). The hair balls had a leathery outer surface (Fig. 4). Upon incision of these balls, it was revealed that these were mostly consists of hair^[4].

The rumen was filled with green and dense foul smelling fluid. The mucosal papillae present in the rumen were found to be alternatively thin and short. Presence of hair ball in the rumen may have resulted in a state of fullness due to which the animals might have shown anorexia. Considering the size

and number of the hair balls, it may be assumed that due to mechanical obstruction in the passing of ruminal content to the next digestive compartment might have resulted in the development of green coloured viscous foul smelling ruminal content. The abnormality in the structure of the ruminal papillae may have resulted from constant rubbing movement of the hair balls over the papillae.

The abomasum was found to be impacted with mixed foreign bodies that was composed of undigested fibers, plastic polythene, jute rope and copper wires (figure 2). Presence of these undigested substances of no nutritional value suggested that the animal might have been suffering from Pica^[5] and also indicates the viable reason for bloat and subsequent anorexia¹. Abomasal mucosa was found to be congested and thickened. Small intestine was distended with gas. The mucosal surface of the small intestine was congested with presence of brown coloured mucinous substance mainly in the duodenal tract.

The small intestine was filled with foul smelling greenish fluid with a few necrotic foci on the mucosal surface. Several hemorrhagic spots were present on the omentum. Cecum and ascending colon contained feces, which was liquid in consistency^[6].

From the post mortem findings, along with the history of the kid suggested that kid was anorexic for about three week due to the presence of hair balls in rumen and foreign material in abomasum might have obstructed the normal functioning of the digestion resulting in impaction, bloat and toxemia which may have resulted in the death of the kid.



Fig 1: Photograph showing bloat Sirohi breed



Fig 2: Photograph showing one trichobezoar with hair



Fig 3: Photograph showing of rumen with feed material and trichobezoar and polythene



Fig 4: Photograph showing of trichobezoar with a leathery outer shell.

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