CASE REPORT
JIVA 21 (1) April 2023
https://doi.org/10.55296/JIVA/21.1.2023.105-109

Received: 22/8/22
Accepted: 02/10/22

GASTRIC FOREIGN BODY BEZOAR IN A NINE-MONTH-OLD DOG AND ITS SURGICAL MANAGEMENT

Remya V[1]., Abhijith S.P[2]., Sooryadas S[1]*., Jinesh Kumar N.S[1]., Dinesh P.T[1]., Vipin Prakash J.S[3]., Sachin S[2]., Sruthi Chandramohan[3], Manasa M[3] and Lalith Kenjale[3].

Assistant Professor[1]; Final Year BVSc. & AH Student[2], M.V.Sc. Scholar[3]
Department of Veterinary Surgery and Radiology
College of Veterinary and Animal Sciences, Pookode, Wayanad, Kerala.
*Corresponding author: sooryadas@kvasu.ac.in

ABSTRACT

A nine-month-old male Spitz was presented with clinical signs of lethargy, dehydration, and haematemesis persisting for one month. Physical examination and radiographic examination of the stomach indicated presence of foreign body in stomach. Under general anesthesia, gastrotomy was performed. A gastric bezoar comprising of pebbles, hairballs and kitchen scrubber occupying the gastric lumen and causing outflow obstruction was removed. The gastrotomy and the abdominal incision were opposed in routine manner. Post-operative antibiotics, anti-inflammatory drugs and fluid therapy were followed. The animal had an uneventful recovery.

Keywords: canine, gastrotomy, foreign body, gastric bezoar

INTRODUCTION

Gastric bezoar is defined as a foreign body formed of accumulated ingested material, most commonly found as a hard mass or concretion in the stomach. It can be plastic sacs, toys, small pebbles, hairballs or kitchen scrubbers. The resultant obstruction often leads to intractable vomiting and the consequences can become life-threatening. Hence such cases should be treated as an emergency.

Gastrointestinal foreign bodies are commonly encountered in companion animal practice and may present with a variety of clinical signs depending on the location, the degree and the duration of the obstruction (Aronson *et al.,* 2000).

Obstructive stomach or gastrointestinal foreign bodies (FB) occur when a pet eats a non-food object and it cannot pass through the gastrointestinal (GI) tract. Foreign bodies can be toys, socks, string, bones and even hair balls. These items can become lodged under the tongue, inside the oesophagus, stomach, or intestinal tract. Initial clinical signs may not alert

the owner to seriousness of condition, but once the foreign body blocks the pylorus, the case will become an emergency which may be evidenced as vomiting because of outflow obstruction, gastric distention and/or mucosal irritation (Hunt *et al.,* 2004).

Young animals more commonly ingest foreign bodies than older animals and gastric or intestinal foreign bodies should be suspected in any puppy or kitten presented with acute abdominal distension and vomiting (Horstman *et al.,* 2003).

Gastrointestinal obstruction results in disturbances of fluid balance, acid-base status and serum electrolyte concentrations due to hypersecretion and sequestration within the gastrointestinal tract which is exacerbated by vomiting and impaired oral intake of fluid and nutrients (Boag *et al.*, 2005).

Gastrointestinal foreign bodies may cause complete or partial obstruction. In general, complete obstruction is associated with more dramatic clinical signs and a rapid deterioration whereas partial obstruction may be associated with more chronic signs of maldigestion and malabsorption (Aronson *et al.,* 2000).

CASE HISTORY AND OBSERVATION

A nine-month-old male spitz was presented to the Teaching Veterinary Clinical Complex, Pookode, Wayanad with complaint of lethargy, haematemisis, loss of appetite and nausea for one month.

Physical examination and blood tests were performed to rule out the causes for the observed clinical signs. Abdominal palpation indicated severe abdominal pain. On radiographic examination the presence of foreign material could be appreciated in the stomach (Fig. 1).

TREATMENT AND DISCUSSION

Gastrotomy was scheduled to remove the foreign material. The dog was premedicated with pantoprazole @ 1mg/kg, meloxicam @ 0.2mg/kg and amoxicillin sulbactam @ 12.5mg/kg intravenously. Pre-anaesthesia was performed with a combination of dexmedetomidine @ 2.5mcg/kg, buprenorphine @ 0.01mg/kg and midazolam @ 0.2mg/kg administered intravenously. Anaesthesia was induced with propofol loaded at 1 mg/kg administered intravenously "to effect". Endotracheal intubation was then performed with size 5 endotracheal tube. The patient was connected to circle naesthetic system and anaesthesia was maintained with isoflurane in oxygen. Ventral abdomen was prepared, extending from xiphoid to pubis. Patient was positioned in dorsal recumbency and the surgical site was scrubbed with chlorhexidine scrub followed by surgical

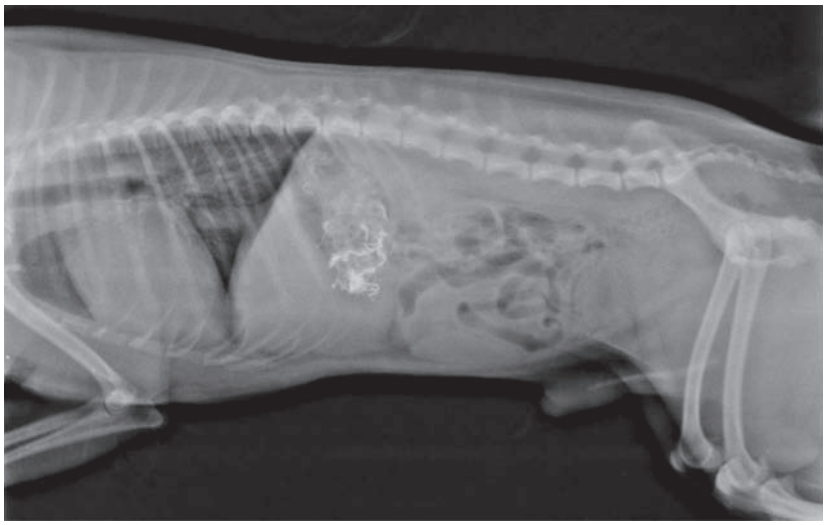

Figure 1: Lateral radiograph showing gastric foreign body

spirit and 5% povidone iodine solution. Ventral midline celiotomy was performed extending the incision from xiphoid to pubis. Stomach was exteriorised and foreign body was palpated in the pyloric antrum. Gastrotomy was performed at the pyloric antrum and foreign body was removed. Gastrotomy incision was closed by Connell's suture pattern using polydioxanone 3-0 and the suture site was omentelized. Laparotomy incision was closed in routine manner. Patient recovered from anaesthesia without any complication. The foreign body was identified as a gastric bezoar formed of kitchen scrubber, pebbles and hairballs (Fig.2).

Post operativelyaoxycillin clavulanate @ 12.5mg/kg b.wt. BID PO, pantoprazole 1mg/kg.b.wt OD PO, ondansetrone @ 1mg/kg.b.wt BID PO, ethamsylate 50mg OD PO and syrup sucralfate1tsp BID PO were followed for 5 days. Owner was advised to provide semisolid diet for 7 days. Animal had an uneventful recovery and the sutures were removed on 10th post operative day.

Gastric foreign bodies are more frequently observed in younger animals. Smaller, blunt or linear objects may pass the stomach and could cause intestinal obstruction. If the foreign body blocks the gastric outflow, the case can be considered as an emergency. Once the gastric outflow is blocked, there will be accumulation of gas within the stomach nd eventually it will lead to gastric dilatation. The dilated stomach may press the diaphragm and can cause severe respiratory distress. Passing an oral stomach tube may relieve the gas immediately. If not, the obstruction should be removed immediately. Severe dehydration and electrolyte changes can

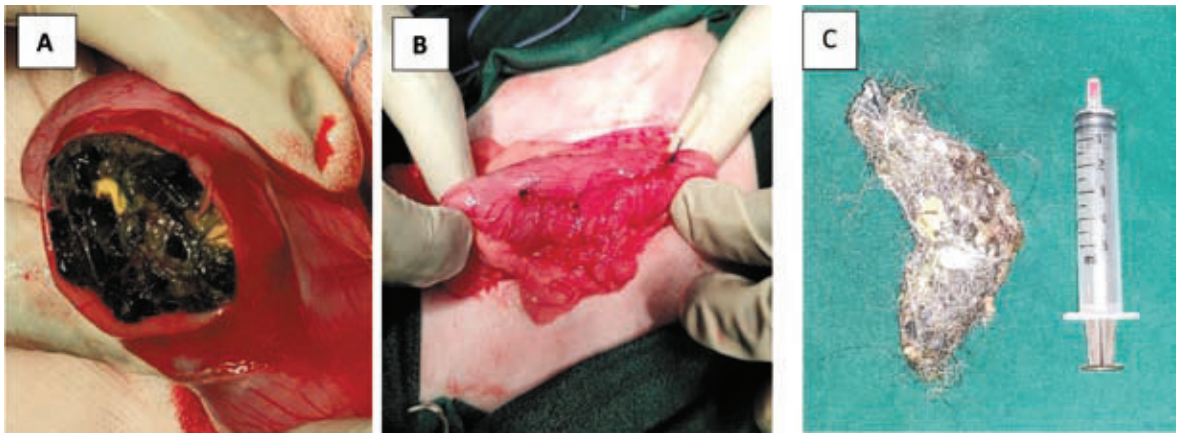

Figure 2: A-Gastrostomy incision for removal of foreign body. B-Gastrotomy incision closure in Connell's suture pattern and omentalisation. C- Foreign body identified as gastric bezoar.

occur when a foreign body obstructs the stomach. Additionally, the obstruction can cause pressure damage to the wall of the GI tract and lead to a perforation (Aronson *et al.,* 2000). This hole allows GI tract fluid to leak out of the intestines and can cause a severe infection and septic shock which can be life threatening. The location of foreign body, its composition and retention time will all influence the consequences of the foreign body obstruction. Proper diagnostic imaging is needed to identify the position of the foreign body. If it is located in the oesophagus or in the stomach and is small enough, it can sometimes be removed with nonsurgical endoscopy. However, if the foreign body is sharp or too large it may not be amenable to safe removal and require a gastrotomy. The longer the foreign body is lodged, often the worser the damage associated with gastrointestinal tract. The majority of obstructive non-linear gastrointestinal foreign bodies compromise the blood supply to the intestinal segment by luminal distention leading to intestinal wall oedema and progressive necrosis. These factors contribute to ileus and to an increase in the number of pathogenic intraluminal bacteria leading to the breakdown of the mucosal barrier and systemic endotoxemia (Gary, 1993). Gastrotomy or enterotomy is often performed for removal of foreign body, but sometimes, a damaged section of gastrointestinal tract needs to be removed. After removal of foreign body gastrotomy incision should be closed aseptically. Connell's pattern of suture is recommended for gastrotomy incision closure. If the foreign body material is made of a metal, such as lead or zinc (such as building materials or pennies), the metal toxicity can cause signs of anaemia Boag *et al.*, 2005). Most common complication asscociated with gastro intestinal surgery is suture dehiscence and subsequent peritonitis.

CONCLUSION

A nine-months old male spitz was presented to Teaching Veterinary Clinical Complex, Pookode with clinical symptoms of vomiting, haematemesis, and anorexia for one month. After physical, radiographic and the case was diagnosed as gastric foreign body and subsequent pyloric obstruction. Gastrotomy was performed to remove the foreign body. The foreign material was identified as gastric bezoar. The dog made an uneventful recovery after surgical treatment.

ACKNOWLEDGEMENT

The authors acknowledge the Professor & Head of Teaching Veterinary Clinical Complex and the Dean of College of Veterinary & Animal Sciences, Pookode for the facilities and support provided.

REFERENCES

Aronson, L. R., Brockman, D. J. and Brown, D. C. 2000. Gastrointestinal emergencies. *Vet. Clin. North Am. Smal.l Anim*. **30**: 555-579.

Boag, A. K., Coe, R. J., Martinez, T. A. and Hughes, D. 2005. Acid-base and electrolyte abnormalities in dogs with gastrointestinal foreign bodies. *J. Vet. Intern. Med*. **19**: 816-821.

Gary, W. E. 1993. Complications of gastrointestinal surgery in companion animals. *Vet. Clin. North Am. Small Anim*. **41** (5): 916-920.

Horstman, C. L., Eubig, P. A., Cornell, K.K., Khan, S. A., Selcer B. A., 2003. Gastric outflow obstruction after ingestion of wood glue in a dog. *J. Am. Anim. Hosp*. **39** (7): 47-49.

Hunt. G., Worth, A., Marchevsky, A. 2004. Migration of wooden skewer foreign bodies from the gastrointestinal tract in eight dogs. *J. Small. Anim. Pract.* **45** (10): 362-363.