DIAGNOSIS AND SURGICAL MANAGEMENT OF GASTRIC FOREIGN BODY IN A DOG

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ABSTRACT

A mixed breed dog was presented with a history of accidental ingestion of sponge ball 10 days back. Animal was showing frequent vomiting, inappetence, lethargy and depression after ingestion of ball. The presence of gastric foreign body within stomach was diagnosed by contrast radiography and ultrasonography and foreign body was recovered through gastrotomy operation under general anesthesia.

Key words: Dog, foreign body, sponge ball

Introduction

Gastric foreign bodies are common in small animals and may leads to obstruction of the gastrointestinal tract. Canines are quite curious and have a habit of playing and eating nonfood items like toys, strings, leashes, clothing, large chunks of meat bones or even trash, stones and bottle caps leading to obstruction of the gastro-intestinal tract (Rouholamin, 1980). The most common clinical signs are persistent vomiting, partial to complete anorexia, weight loss and lethargy. The diagnosis and removal of foreign body from the stomach is usually considered an emergency.

History and Diagnosis

A 2-year-old mixed breed male dog was presented with history of accidental intake of sponge ball 10 days before. Initially animal was partially anorectic then after 4 days animal was completely anorectic and frequent episodes of vomiting was observed. Animal was treated prior with therapeutics and no improvement in the condition. Contrast radiography with barium sulphate revealed the radio-opaque irregular round shaped foreign body in the stomach (Fig. 1). On ultrasonography a hyperechoic linear body was present in gastric lumen and distal acoustic shadowing was also seen which suggested the presence of foreign body in stomach (Fig. 2).

On the basis of history, clinical signs, radiographic and ultrasonographic findings, the condition was diagnosed as gastric foreign body, hence mid ventral laparotomy was planned to remove the foreign body from stomach.

Treatment

The surgery was carried out under general anesthesia with combination of Atropine Sulphate, Xylazine and Ketamine with the dose rate of 0.04 mg/kg, 0.5 mg/kg and 10 mg/kg b.wt., respectively (Kolata and Rawlings, 1982).The gastrotomy (Fig. 3) was performed through a post-xiphoid mid ventral laparotomy approach and the foreign body which was a sponge ball, removed. Gastric mucosa was sutured by inverted sutures *i.e*., Lambert and Cushing pattern with Vicryl (Polyglactin 910) No. 2-0. The peritoneum and muscle layers sutured by simple continuous suture pattern with Vicryl (Polyglactin 910) No. 2. Skin was sutured by simple interrupted suture pattern by using silk No. 1 (Fig. 4). Post-operatively Inj. Ceftriaxone (20 mg/kg b.wt, i.v.) and Inj. Meloxicam (0.2 mg/kg b.wt, i.m.) were administered for 5 and 3 days, respectively. The wound dressing was done daily with 0.1% Povidone iodine solution till complete healing. Dog was maintained on fluid therapy for 5 days. The dog was given blended diet for next 5 days. The sutures were removed on 10th post-operative

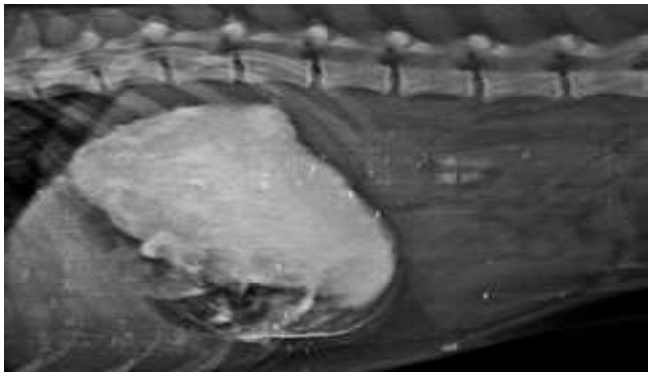

Fig. 1: Radiographic image (contrast) showing- radiopaque mass in the stomach

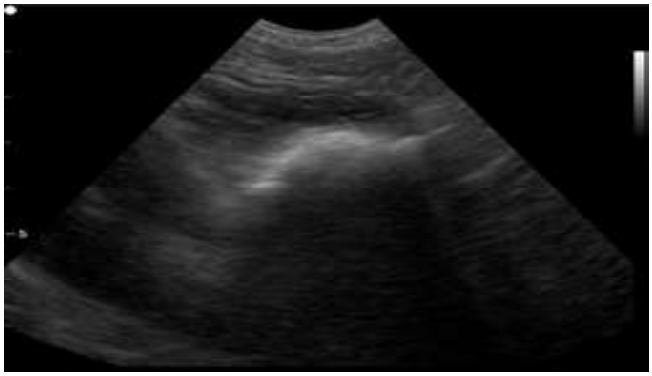

Fig. 2: Ultrasonographic image showing- Hyperechoic body & distal acoustic shadowing

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Fig. 3: Foreign body (sponge ball) visible through gastrotomy incision

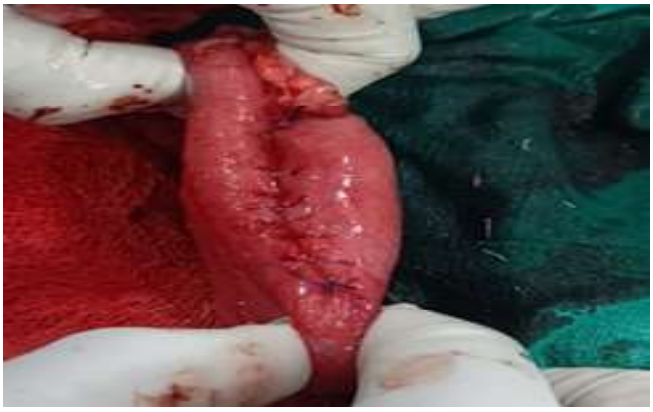

Fig. 4: Stomach after suturing

day. The dog recovered uneventfully.

Discussion

Gastrointestinal foreign bodies are commonly encountered in first-opinion companion animal practice. A variety of clinical signs are seen depending on the location, the degree and the duration of the obstruction (Papazoglou *et al.,* 2003). Gastrointestinal obstruction results in disturbances of fluid balance, acid-base balance and serum electrolyte concentrations due to hyper secretion and sequestration within the gastrointestinal tract which is exacerbated by vomiting and impaired oral intake of fluid and nutrients (Boag *et al.,* 2005). Vomiting is almost always the hallmark signs of gastric foreign bodies. If the object is large, that may completely obstruct the outflow and the vomiting may be too frequent. Vomiting may be intermittent, if the foreign body is small and animals may continue to eat and remain active (Patil *et al.,* 2010). Abdominal radiography has traditionally been used in the investigation of a suspected gastrointestinal foreign body (Manczur *et al.,* 1998). Ultrasonography is usually considered as an adjunctive test when survey radiographs are equivocal (Hoffman *et al.,* 2003). When the radiographic diagnosis of a foreign body is uncertain, a gastrointestinal contrast study can be performed. Gastrointestinal barium contrast studies may be non-diagnostic if the contrast is not retained due to vomiting, are timeconsuming, and may delay the decision for surgical exploration and a gastrointestinal barium contraststudy is contraindicated if a perforation is suspected or immediate surgery is contemplated. Electrolyte abnormality should be corrected in dogs with vomiting and anorexia since hypokalemia is likely to occur (Boag *et al.,* 2005). Pre- and post- operative administration of ringer's lactate helps to maintain fluid status of the animals and correct acid-base abnormalities (Patil *et al.,* 2010). Postoperative complications such as routine incisional problems, haemorrhage, pancreatic or common bile duct damage, and persistent gastric outflow obstruction (Walter and Matthiesen, 1993) are very common if treatment is delayed, however in present case no such complications were noticed and animal recovered uneventfully.

References

Boag AK, Coe RJ and Martinez TA (2005) Acid-base and electrolyte abnormalities in dogs with gastrointestinal foreign bodies. *J. Vet. Intern. Med.* **19**:816.

Hoffman KL (2003) Sonographic signs of gastroduodenal linear foreignbody in 3 dogs. *Vet. Radiol. Ultrasound.* **4**:466-469.

Kolata RJ and Rawlings CA (1982) Cardiopulmonary effects of intravenous xylazine, ketamine, and atropine inthe dog. *Amer. J. Vet. Res.* **43**: 2196-98.

Manczur F, Voros K, Vrabely T, Wladar S, Nemeth T and Fenyves B (1998) Sonographic diagnosis of intestinal obstruction in the dog. *Acta Vet. Hung.* **46**(1):35-45.

Papazoglou LG, Patsikas MN and Rallis T (2003) Intestinal foreign bodies in dogs and cats. *Compend. Contin. Educ. Pract. Vet.* **25**:830-843.

Patil DB, Parikh PV,Jhala, SK, Tiwari DK and Mehra J (2010) Gastric foreign bodies in dogs - A report of five cases. *Intas Polivet.* **11**(II): 297-298.

Rouholamio R (1980) Gastric foreign body in a dog. *Mod. Vet. Pract.* **61**: 849-45.

Walter MC and Matthiesen DT (1993) Acquired antral pyloric hypertrophy in the dog. *Vet. Clin. North. Am. Small Anim. Pract.* **23**: 547-53.