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Clinical Article

SURGICAL MANAGEMENT OF GASTRIC LINEAR POTENTIAL FOREIGN BODY ENTANGLED WITH HAIR BALL IN A GERMAN SHEPHERD DOG

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SUMMARY

Gastric foreign bodies are common incidence in dogs particularly younger animals because of their playful nature, indiscriminate feeding habits, exposure to toys, dental sticks and chews. An eight month old German Shepherd dog was presented with the complaint of recurrent vomiting, fresh blood in vomitus, anorexia and abdominal pain. Clinical, radiographic and ultrasonographic examination revealed the presence of a potential linear foreign body of 3-5cm length in the stomach. Under general anaesthesia, gastroscopic retrieval was attempted but failed since the foreign body was found entangled in a large hair ball mass. Thus gastrotomy was performed for the retrieval of the foreign body and removal of the hair ball. The animal recovered uneventfully without any complications.

Keywords: Foreign Body, Gastroscopy, Gastrotomy, Hair ball

Gastrointestinal obstruction results in disturbance of fluid balance, acid-base status and serum electrolyte concentration 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). Animals at any age can suffer from gastric foreign body obstruction but younger animals are more prone (Rasmussen, 2003). Dogs are more likely to be presented with gastrointestinal foreign bodies because of their slightly indiscriminate feeding habits, swallowing of incompletely masticated food and exposure to toys and dental chews (Gianella *et al.*, 2009). Vomiting is always the hall mark sign of gastric foreign body (Patil *et al.*, 2010) in addition to anorexia, pain, respiratory distress and restlessness (Williard, 2004). The present article reports the surgical retrieval of a linear potential foreign body from the stomach by gastrotomy.

An eight month old German Shepherd dog was brought to Veterinary Clinical Complex with the complaint of recurrent vomiting, fresh blood in the vomitus, anorexia, restlessness and lethargy since five days. On physical examination, the animal had a tucked up abdomen and was evincing pain on abdominal palpation. Radiographic examination of the abdomen revealed a potential linear metallic foreign body of 3.7cm diameter in the stomach (Fig. 1). Ultrasonographic examination was performed to detect any other gastrointestinal foreign bodies but no characteristic findings were evident. Haemato-biochemical parameters were within the normal clinical range. Thus, it was decided to perform gastroscopy for the retrieval of the potential foreign body.

Animal was fasted for 12 hours prior to gastroscopy. The dog was premedicated with Atropine sulphate @ 0.04 mg per kg b.wt subcutaneous followed by sedation with Xylazine Hydrochloride @ 1mg per kg b.wt intramuscular. Anaesthesia was induced with Ketamine Hydrochloride @ 5mg per kg b.wt intramuscular and maintained on xylazine-ketamine combination intravenous. The dog was restrained in right lateral recumbency and gastroscopic retrieval of the foreign body was attempted. On gastroscopy, the metallic linear potential foreign body was found entangled with a large mass of hairball in the stomach (Fig. 2) which was neither visible on radiograph nor on ultrasonographic examination. Several attempts to free and retrieve the foreign body from the hairball mass failed after which it was decided to perform gastrotomy.

After aseptic preparation of ventral abdomen, a midline incision laparotomy was performed through a midline incision. The stomach was identified, retrieved outside the abdominal cavity and the cavity was packed with sterile gauge pieces. A linear incision was made on the avascular area of the stomach and the potential foreign body along with the large hairball mass was removed from the stomach (Fig. 3). The stomach was sutured in double layer with simple appositional suture pattern followed by lembert's suture pattern using Catgut no: 3-0. Abdominal cavity was lavaged with metronidazole solution and the linea alba, subcutaneous tissue and skin were closed as per standard protocol. Postoperatively, antibiotics and analgesics were administered parenterally for five days. The dog was kept on intravenous fluids for the first one week, followed by liquid diet for the next five days. Daily antiseptic dressing of the surgical wound was also advised. The skin sutures were removed 12th day post-operative and the animal recovered uneventfully.

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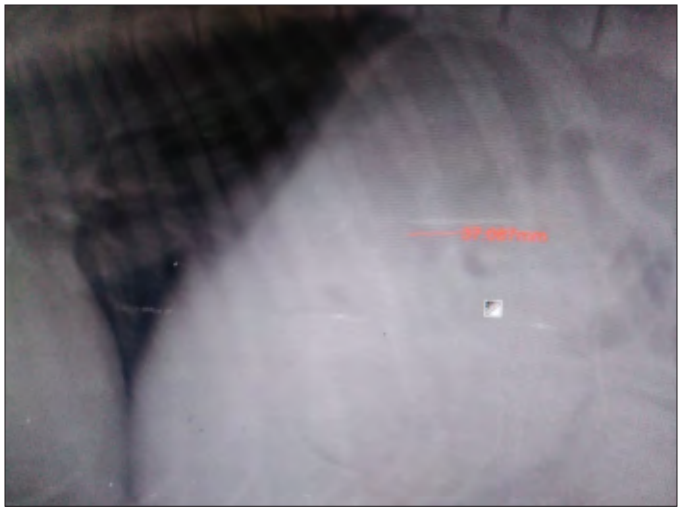

Fig. 1. Radiographic image showing the presence of linear potential foreign body in stomach

Fig. 2. Gastroscopic image showing the presence of linear metallic foreign body entangled in a large hair ball mass

Fig. 3. Surgically retreived linear mettalic foreign body and large hairball mass

The presence of gastric foreign bodies is higher in young dogs due to their voracious and indiscriminate and gulping nature of feeding habits (Fossum, 2007). In the present case also, the dog was young and of eight months old. In dogs, the most common foreign bodies being reported include bone or cartilage material, fishhooks, needle, chew treats, balls and toys (Sale and Williams, 2008).The most common clinical signs are persistent vomiting, partial to complete anorexia, weight loss and lethargy (Uma Rani *et al.*, 2010). The dog was also presented with similar clinical signs. Gastric foreign body maybe difficult to diagnose on both radiograph and ultrasound examination as there is often presence of gas and food material present in the stomach that can cause shadowing and masking of the object by overlying opacities (Webb, 2010) but plain radiography is suitable to diagnose metallic foreign bodies (Uma Rani *et al.*, 2010). Here the metallic foreign body was visible radiographically but the large hairball mass was undetectable in both radiography and ultrasonography. Most of the gastric foreign bodies can be removed endoscopically but if the foreign bodies are large and if the object has very sharp surfaces, endoscopic removal may require longer anaesthetic time and potential to cause damage to the esophagus (Webb, 2010). In the present case also, the foreign body was found entangled with the large hairball mass and it was not possible to remove endoscopically.

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