Endoscopic Retrieval of Gastric Foreign Bodies in Two Dogs

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ABSTRACT

Gastric and oesophageal foreign bodies (FBs) in dogs cause vomiting, decreased appetite, discomfort due to abdominal pain and lethargy. They result in life-threatening emergencies and thus need immediate intervention. In this study, two dogs of different breeds and ages with a history of foreign body ingestion and vomiting were examined through radiography, ultrasonography and endoscopy. Radiography helped to identify and localise one of the two foreign bodies reported in the study. However, gastro-endoscopy provided direct visualization of both the foreign bodies and allowed for their retrieval under general anaesthesia in these cases.

Keywords: Foreign bodies, Oesophagus of dogs, Endoscopy

INTRODUCTION

If a dog shows sudden changes in appetite, abdominal pain, salivation, retching, gagging, regurgitation, vomiting, respiratory distress, and restlessness regardless of age, it is important to consider the possibility of foreign body ingestion as a potential cause (Gianella *et al.,* 2009). The diagnosis and removal of radiolucent foreign bodies can be challenging, and is crucial to remove gastric foreign bodies quickly to prevent them from entering into small intestines, which may cause obstruction. Bekkerman *et al.* (2016) recommended using a retrieval net, forceps, or a polypectomy snare for the endoscopic removal of foreign bodies from the oesophagus. Endoscopic removal of a sewing needle and a metal bottle cap from the stomach using long alligator forceps and an endoscopic snare, respectively, was reported by Mohanambal *et al.* (2018a) and Mohanambal *et al.* (2018b). In this study, gastro-endoscopy was found to be an effective method for examining and retrieving foreign bodies with minimal invasiveness.

CASE HISTORY AND OBSERVATION

Case-1

A 6-month-old male Coton de Tauer was reported to the Veterinary Clinical Complex, Namakkal, with a history of ingestion of the hair band. Radiography was inconclusive, and ultrasonography revealed a hyperechoic area with anechoic shadowing measuring 9cm× 5 cm in length (Fig. 1) in the fundic area of the stomach, which was suggestive of a gastric foreign body. Before proceeding to endoscopy, haemato-biochemical examination was performed, which revealed normal parameters, except for the mildly elevated PCV (47.9%). An endoscopy was performed under anaesthetic protocol, inj. Diazepam @ 0.5 mg/kg Bwt, IV and inj. Propofol @ 4 mg/kg Bwt, IV. The hairband had been removed successfully from the fundic region of the stomach by using an endoscopic snare (Fig. 2 and 3).

Case-2

A 3-year-old male Labrador Retriever was presented with a history of ingestion of a bike key. Clinical examination and radiography confirmed the presence radio-opaque metal object in the stomach. No significant changes were observed in the haemato-biochemical values. Endoscopy was performed with the formulated standard endoscopic anaesthetic

protocol (inj. Diazepam @ 0.5 mg/kg B.wt, IV and inj. Propofol@ 4 mg/kg B.wt, IV). The key with the holding ring had been removed from the fundic region of the stomach through an endoscopic snare. (Fig.4).

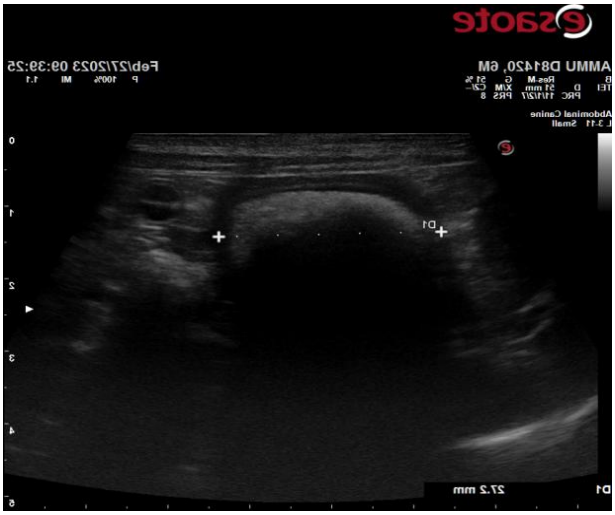

Fig. 1: Ultrasound image revealing anechoic shadowing with a hyperechogenic border in the stomach

Fig. 2: Hair band removed from the gastric region of the animal

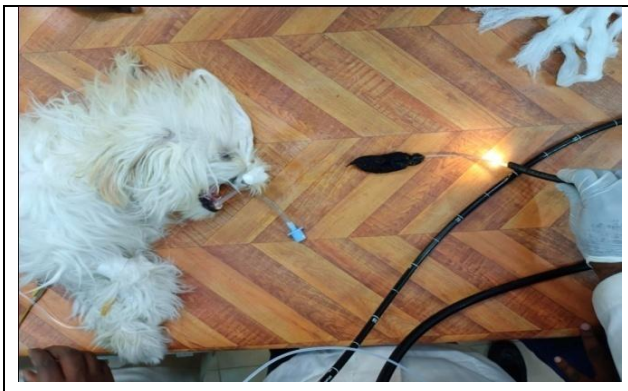

Fig. 3: Endoscopic retrieval of the hair band from the dog

Fig. 4: Endoscopic retrieval of a bike key from the stomach of the dog

DISCUSSION

In the study, two dogs belonging to different breeds and age groups had a history of foreign body ingestion and chronic vomiting. They were subjected to endoscopic examination after radiographic and ultrasonographic assessments, along with hematobiochemical investigations. The initial screening for the presence, type and location of foreign body was done with plain radiographs, as radiography remains a good technique for diagnosing foreign bodies in small animals (Fossum, 2012). One dog showed an elevated packed cell volume, and in another dog, all the parameters were normal. Both the foreign bodies were removed from the gastric region with the help of an endoscopic snare, as was reported by Bekkerman *et al.* Previous studies had reported endoscopic removal of socks (Sivaraman *et al.* 2017), linear foreign body (Mohanambal *et al., 2018a* and Ravi *et al.,* 2019), sewing needle (Sravanti *et al.,* 2023), coin (Vijayakumar *et al.,* 2009) and puffer ball (Vijayakumar *et al.,* 2018) from the oral cavity.

CONCLUSION

Flexible endoscopy is a valuable tool to visualize and aid in the removal of gastric foreign bodies. The snare used in these two cases was effective in holding and removing

both the hair band and key effectively, as both were without any sharp edges.

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