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Successful surgical retrieval of intestinal foreign body in a Labrador dog: A case report

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Abstract
Dogs have indiscriminate feeding habits and often swallow non edible foreign body. A two and half-year-old male Labrador dog was presented to the veterinary clinical complex, Veterinary College and Research Institute Namakkal with a history of anorexia and not voiding faeces. Ultrasonography revealed distended intestinal loops cranial to the hyperechoic shadowing area measuring about 6 cm. Rectal examination revealed an empty rectum. Plain radiography revealed no significant findings. Further contrast radiography study suggested of intestinal stasis. Haemato- Biochemical parameters evaluated were within the normal range. Under general anaesthesia using propofol and maintenance of Isoflurane gas midline celiotomy was performed. Enterotomy was performed and the foreign body socks was removed successfully. Intestine was closed by single layer interrupted suture followed by connel suture pattern. Post operatively animal was treated with antibiotics and analgesic for 5 days and the animal recovered uneventfully.

Keywords: Dog-radiopaque foreign body- intestinal obstruction-enterotomy

Introduction
Intestinal foreign bodies are the most common cause of intestinal obstruction in dogs and cats (Papazoglou *et al*., 2003) [8]. Dogs with large oesophagus can safely ingest things that are far larger than what can be safely passed through the intestines. Dogs commonly consume stones, plastic, and rubber things as foreign bodies. (Hoffmann, 2003) [4]. Gastrointestinal foreign bodies may cause complete or partial obstruction. In general, complete obstruction is associated with more dramatic clinical signs and rapid deterioration where as partial obstruction may be associated with more chronic signs of maldigestion and malabsorption (Papazoglou *et al*., 2003) [8]. Clinical signs commonly associated with gastrointestinal diseases such as anorexia, vomiting, diarrhoea, abdominal discomfort and lethargy are non-specific and are variably present in dogs with gastrointestinal foreign bodies (Hayes, 2009) [3]. Foreign body obstruction may be classified based onthe degree of obstruction (complete or partial), Location of obstruction along the intestinal tract (proximal or "high"; middle; distal, or "low"; and colonic), Pathophysiologic alterations (simple, or mechanical, versus strangulating). In complete simple intestinal obstruction, accumulation of gas and fluid contribute to luminal distention proximal to the obstruction. Clinical signs of partial intestinal obstruction are associated with maldigestion and malabsorption of nutrients stagnant loop syndrome. (Papazoglou *et al*., 2003) [8]. The majority of obstructive non-linear intestinal foreign bodies compromise the blood supply to the intestinal segment by luminal distention leading to intestinal wall edema and progressive necrosis. These factors contribute to ileus and an increase in the number of pathogenic intraluminal bacteria leading to the breakdown of the mucosal barrier and systemic endotoxemia (Ellison, 1993) [2].

Case history& Clinical Observation
A two and half-year-old Labrador dog was presented with a history of anorexia and not voiding feces for the past six days. A clinical examination revealed normal findings.

A plain X-ray revealed no significant findings. Contrast radiography was made using barium at the rate of 2 ml per kg body weight which revealed barium stasis after 3 hours indicative of radiopaque foreign body (Fig.1) The dog was subjected to an ultrasound examination of the abdomen using Esoate Mylab 40 Vet Ultrasound machine. Ultrasonography revealed distended intestinal loops cranial to the hyperechoic shadowing area measuring about 6 cm (Fig.2) Haemato biochemical parameters were within the normal range.

Diagnosis

Based on the history, clinical signs, radiography and ultrasonography the case was diagnosed as intestinal obstruction due to a radiopaque foreign body.

Treatment and discussion

After getting consent from the owner it was decided to go for surgical removal of the foreign body. Based on the diagnosis mid ventral celiotomy was planned. Under general anaesthesia using Diazepam @ 0.2 mg/kg b.wt IV and propofol at 4 mg/kg b.wt IV maintenance with isoflurane at the rate of 2%. The animal was secured in dorsal recumbency and entire ventral abdominal area was prepared for aseptic surgery. Following caudal mid ventral incision over skin, subcutaneous tissue linea-alba, obstructed part of intestinal loops ileum was exteriorized after that enterotomy was performed at the anti-mesenteric border. The foreign body was removed, it was a socks. (Fig 3) Then the enterotomy area was washed with normal saline and metronidazole and then intestine was closed by single layer interrupted suture followed by connel suture pattern using Polyglycolic acid No.3.0 (Fig.4). After enterotomy closure leak test was performed to rule out leakage (Fig.5) and then Linea alba was closed by interrupted suture pattern using polyglycolic acid No.1 and the subcutaneous suture was made using Cat gut No.1.0. Skin was opposed by cross mattress using Polyamide No.1. Postoperatively animal was treated with Ceftriaxone @ 20 mg/kg b.wt.IV, Tramadol @ 2mg/kg b.wt.IV, Pantoprazole @ 1mg/kg b.wt.IV and Dextrose normal saline and Ringer's lactate @ 10 ml/kg b.wt.IV for six-days.Skin sutures were removed on 10th day post surgery. Solid diet was started from 10th post operative day. The animal recovered uneventfully without any post operative complications.

Intestinal foreign bodies are one of the most common causes of intestinal obstruction in dogs and cats. Kavirajan *et al.* stated that puppies and kittens are most susceptible to foreign body obstruction due to indiscriminate feeding habits and may also occur in adults also. The treatment was more successful in dogs below 2 years of age (Capak *et al*., 2001) [1]. Balls and other smooth, round foreign bodies have the potential to completely clog the intestine and result in pressure necrosis of the intestinal wall. Occasionally, if they move these items may result in intestinal edema as they go down the intestine. Sharp foreign bodies have the potential to pierce the intestinal wall and result in adynamic ileus and septic peritonitis (Papazoglou *et al*. 2003) [8]. The young pets with in a mean age of 3.5 to 3.7 years developed respective foreign bodies in the gastrointestinal tract due to their voracious, indiscriminative feeding habits and playful nature (Papazoglou, 2003) [8]. In the present study also, the pet is having playful nature and indiscriminate feeding habit let to swallow of cloth socks which got obstructed at the level of small intestine. Papazoglou *et al*. (2003) [8] also opined that to rule out intestinal obstruction from gastritis, intussuception, acute pancreatitis, peritonitis and parvoviral enteritis, diagnostic imaging modalities are important. In the present study also, contrast radiography revealed the diagnosis as obstructive foreign body. Mandeep *et al*., (2012) [7] opined that the intestinal foreign bodies may block the mesenteric blood circulation, followed by necrosis. In the present case, no such block in the mesenteric blood circulation was observed and viable intestinal segment were observed during surgery. The best way to prevent the dog from ingesting the foreign body is to prevent the assess to the object that can be swallowed. Keep dangerous objects away from the dog and allow the dog to chew only toys that cannot be destroyed or swallowed.

Fig 1: Barium stasis indicative of radiopaque foreign body

Fig 2: Ultrasonography revealed distended intestinal loops cranial to the hyperechoic shadow

Fig 3: Retrieval of foreign body- Sock

Fig 4: Enterotomy closure

Fig 5: Leak test- After enterotomy closure

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References

1. Capak D, Simpraga M, Maticiæ D, Bali R, Janoska B. Berl. Munch Tierarztl Wochenschr. 2001;114(8):290-296.
2. Ellison GW: Intestinal obstruction, in Bojrab MJ(ed): Disease Mechanisms in Small Animal Surgery ed 2. Philadelphia Lea & Fabiger; c1993. p. 252-257.
3. Hayes G. Gastrointestinal foreign bodies in dogs and cats: a retrospective study of 208 cases. J Small Anim. Pract. 2009;50:576-583.
4. Hoffmann KL. Sonographic signs of gastro duodenal linear foreign body in 3 dogs. Vet. Radiol. Ultrasound. 2003;44(4):466-469
5. Kavirajan S, Simon MS, Kannan TA. Intestinal Obstruction in Dogs-A review of five cases. The Indian Journal of Veterinary Sciences and Biotechnology. 2016;11(3):45-46.
6. Klenner S, Coenen M, Failing K, Hewicker-Trautwein M, Ternes W, Verspohl J, *et al*. Estimation of intestinal permeability in healthy dogs using the contrast medium iohexol. Veterinary Clinical Pathology. 2009;38(3):353-360.
7. Mandeep Atray, Mulinti Raghunath, Tarunbir Singh, Narinder Singh Saini. Can. Vet. J. 2012;53(8):860-864.
8. Papazoglou LG, Patsikas MN, Rallis T. Intestinal foreign bodies in dogs and cats. compendium on continuing education for the practising veterinarian-north american edition. 2003;25(11):830-845.