

Surgical Management of Intestinal Foreign Body Obstruction in a Dog

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ABSTRACT

A dog was presented with a history of anorexia, reduced defecation and intermittent vomiting for last 7 days. On clinical examination, dog was found to be dull, lean and weak. Radiographic examination of abdomen revealed semi-radiopaque mass and gas filled intestinal loops indicating presence of foreign body in intestine. Exploratory laparotomy was performed for confirmatory diagnosis and subsequent surgical management. Cloth piece intertwined with hairs, obstructing the intestinal tract, was identified in ileum which was removed by enterotomy. The enterotomy site was sutured using polyglactin 910 in simple interrupted suture pattern. Post-operatively, the dog was treated with antibiotics and anti-inflammatory drugs, along with restricted diet and other supportive care. Animal had an uneventful recovery thereafter.

Keywords: Cloth foreign body, Dog, Enterotomy, Intestinal obstruction

INTRODUCTION

Intestinal obstruction is a condition in which the intestinal content cannot be directed or forced further in the aboral direction. Intestinal foreign bodies are one of the prominent and distinguished causes of intestinal obstruction in dogs and cats. Obstruction can be partial or complete depending upon the shape and size of foreign body (Papazoglou *et al.*, 2003). Clinical signs of intestinal obstruction vary according to location, degree and duration of obstruction which may include inappetence to anorexia, cessation of defecation and vomiting not responding to medicinal treatment (Aronson *et al.*, 2000; Papazoglou *et al.*, 2003). Diagnosis is based on the history, clinical signs, abdominal palpation, radiography, ultrasonography and occasionally exploratory laparotomy. Enterotomy is the surgical removal of foreign body from the intestine. Multiple enterotomies may require to remove the linear intestinal foreign body (Papazoglou *et al.*, 2003). The present paper reports a case of intestinal obstruction due to lodged piece of cloth entangled with hairs at the ileo-colic junction and its successful surgical management.

HISTORY AND DIAGNOSIS

A three year old male German shepherd dog was presented with a history of anorexia, vomiting and reduced defecation. On clinical examination, animal was found to be dull, lean and weak. Radiographic examination revealed low soft tissue and mineral radiopacity at the level of ileum and colon, and gas filled intestine cranial to radiopacity



Fig. 1: The lateral radiograph of abdomen showing presence of radiopaque material in the small intestine (yellow arrow) and gas filled intestinal loops cranial to radiopaque material.

(Fig. 1). Based on the clinical findings and radiographical examination, the case was tentatively diagnosed as intestinal obstruction due to foreign body. For confirmatory diagnosis, exploratory laparotomy was performed.

SURGICAL TREATMENT

The dog was established by fluid therapy and then premedicated with butorphanol @ 0.2mg/kg body weight and diazepam @0.25mg/Kg body weight intravenously. The anaesthesia was induced with ketamine hydrochloride @5 mg/kg body weight intramuscularly. Maintenance of anaesthesia was done using ketamine: diazepam mixture at the ratio of 1:1 (v/v) given intravenously. The ventral abdomen was prepared aseptically and dog was positioned in dorsal recumbency. Mid-ventral

laparotomy was performed and the intestinal loops were explored for the foreign body. Obstruction was identified at ileo-colic junction (Fig. 2). The site of obstruction was incised at anti-mesenteric border to remove the foreign body. On further exploration, cloth entangled with hairs was identified as the foreign body (Fig. 3). The foreign body was retrieved using a forceps. The enterotomy site was washed with normal saline to remove the contaminants and was sutured using polyglactin 910 (Vicryl2-0) in simple interrupted suture pattern. The linea-alba was sutured using polyglactin 910 (vicryl1) in a simple continuous pattern followed by subcutaneous tissue and finally intradermal sutures were placed to appose the skin edges.

Post-operatively, the dog was treated using intravenous fluids and the owner was advised to give soft diets, after 48 hours of surgery, for a period of 3-5 days. Antibiotic therapy was initiated using amoxicillin-sulbactam @ 10mg/kg body weight intravenously for 7 days. Tramadol was also given at a dose rate of 2.5 mg/kg body weight intravenously along with meloxicam @0.2 mg/kg body weight intramuscularly for 3 days. The suture site was



Fig. 2: Foreign body obstruction at the Ileo-colic junction. (Left)



Fig. 3: The retrieved foreign body which was found to be a cloth entangled with hair. (Right)

dressed with povidone iodine ointment. The dog recovered uneventfully after two weeks of post-operative care.

DISCUSSION

Gastrointestinal foreign body obstruction can be either complete or partial in nature. Acute onset of clinical signs is observed in case of complete obstruction which may deteriorate rapidly if not intervened. In case of partial obstruction, chronic clinical signs are commonly observed. Foreign bodies lodged in the gastrointestinal tract can cause ulceration, haemorrhage, anorexia, dehydration, perforation, peritonitis, and can result in death if not treated timely (Anoop *et al.*, 2010). Hence, intestinal obstruction should be considered as a surgical emergency. Obstruction with linear foreign body can result in increased peristaltic activity which may contribute to the laceration of intestinal wall (Manjunatha *et al.*, 2019). Delayed surgical management of obstruction can result in necrosis and irreparable damage of intestine (Das *et al.*, 2015). In such cases intestinal resection and anastomosis are indicated to save the life of the animal.

The jejunum is most common site for foreign body obstruction in small animals. Enterotomy is found to be the most effective treatment for foreign body obstruction. Dogs commonly ingest materials like stones, plastic and rubber objects. Treatment was found to be more successful in dogs below 2 years of age. Post-surgical mortality usually occurs in the first week after surgery (Capak *et al.*, 2001).

In contrast to skin wound, dehiscence of the gastro-intestinal tract wounds mostly creates generalized bacterial peritonitis and can even lead to mortality. Factors that negatively affect gastrointestinal healing are of great clinical significance. Exploration of GI tract is considered as a clean-contaminated procedure and the microbial load increases as one progress down the tract. In case of gastro-intestinal tract surgery the higher mortality rate is mainly due to complications like intra-operative spillage, wound dehiscence or perforations that occur in the lower small intestine or colon (Ellison *et al.*, 2011).

CONCLUSION

The present paper reports the successful surgical management of intestinal obstruction at the level of ileo-colic junction in a German shepherd dog.

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