

## **SURGICAL REMOVAL OF A PERFORATING INTESTINAL FOREIGN BODY IN A BEAGLE PUP – A CASE REPORT**

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**Abstract:** A 35 day old Beagle pup was presented with history of distended abdomen, blood tinged diarrhoea and respiratory distress since previous evening. Pain was elicited on palpation of abdomen. Radiographs of lateral and ventrodorsal views of abdomen revealed presence of radiopaque ‘stapler pin’ like foreign body towards the caudal segment of intestine. The condition was diagnosed as a penetrating foreign body and performed an emergency exploratory laparotomy and removed stapler pin from ileocaecocolic junction by enterotomy. The pup was administered with intravenous fluids, antibiotics, H<sub>2</sub> antagonists and vitamin B supplements, postoperatively for five days. The pup had an uneventful recovery.

**Keywords:** Penetrating foreign body, intestine, pup.

### **INTRODUCTION**

Surgical intervention for the retrieval of gastrointestinal foreign bodies is common in the small companion animal practice. Depending on the nature of the foreign body and risk of gastrointestinal tract obstruction, various methods of treatment have been recommended (Pratt *et al.*, 2014). Animals may be presented with a variety of clinical signs depending on the location, degree and the duration of the obstruction (Aronson *et al.*, 2000). Continued peristalsis of the gastrointestinal tract may cause the object to become taut, cut into the mucosa and then lacerate the mesenteric border of the intestine, causing peritonitis by spillage of intestinal content into the peritoneal cavity. This allow bacterial proliferation and sepsis. The present paper describes the prompt diagnosis and surgical intervention leading to complete recovery of a beagle pup presented with gastrointestinal perforation due to a foreign body.

### **HISTORY AND DIAGNOSIS**

A 35 days old Beagle pup weighing 1.4 kg was presented to the University Veterinary Hospital, Mannuthy, Kerala Veterinary and Animal Sciences University with a history of distended abdomen, blood tinged diarrhoea and respiratory distress since the previous

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evening. On physical examination, the pup was dull and depressed with distended abdomen. The mucous membrane was pale and rectal temperature was 37.8<sup>0</sup> C. abdomen was tensed and on palpation, puppy elicited pain. Radiographic examination of lateral (Fig.1) and ventrodorsal (Fig.2) views of abdomen revealed presence of radiopaque foreign body in the intestinal tract, with size and structure similar to 'Stapler pin'.

The condition was tentatively diagnosed as penetrating intestinal foreign body and emergency laparotomy was decided.



Fig1. Lateral abdominal radiograph showing the radioopaque foreign body

### **SURGICAL TECHNIQUE**

Preoperatively the animal was stabilized with intravenous Dextrose Saline and antibiotics and prepared the animal for aseptic surgery. Anaesthesia was induced by masking using 3% Isoflurane. Animal was intubated with 4mm cuffed endotracheal tube after induction and anaesthesia was maintained with 1.5-2 % Isoflurane in oxygen. Animal was positioned in dorsal recumbancy and laparotomy was performed through a ventral midline incision. On opening the peritoneal cavity, gastric contents were found spilled out indicating perforation. Lavaged the peritoneal cavity with warm normal saline. A devitalised perforated area was noticed on wall of stomach at the fundus region. The devitalised areas were resected and the defect was closed in connels followed by cushings suture pattern with polyglactin 910 size 3/0. After thorough examination of the GI tract, stapler pin lodged at the ileocaeco-colic junction was located and retrieved through enterotomy (Fig.3). Sutured the enterotomy site with simple continuous pattern using Polyglactin 910 size 3/0. Entire gastrointestinal tract was evaluated for perforation or devitalisation. Repositioned the viscera into the abdominal cavity and sutured peritoneum and muscle layers with simple continuous pattern using polyglactin 910 size 2/0. The skin was apposed in horizontal mattress pattern using monofilament nylon. Post-operatively oral intake was withheld for 72 hours and pup was

maintained on intravenous fluids. Inj. Amoxicillin Sulbactam at a dose rate of 10mg/kg bodyweight, inj. Ranitidine at a dose rate of 0.5mg/kg bodyweight and Vitamin B complex were administered for five days. Sutures were removed on the ninth postoperative day. Pup had an uneventful recovery



Fig 2. Stapler pin retrieved from ileocaecocolic junction

## DISCUSSION

Gastrointestinal obstruction results in disturbances of fluid balance, acid-base status and electrolyte levels due to hypersecretion and sequestration within the gastrointestinal tract which is exacerbated by vomiting and impaired oral intake of fluid and nutrients (Boag *et al.*, 2005). The presence of a gastrointestinal foreign body, preoperative peritonitis and greater than 15 per cent preoperative weight loss all increase the risk of dehiscence (Allen *et al.*, 1992 and Ralphs *et al.*, 2003).

In the present case, gastrointestinal penetrating foreign body, a stapler pin was found at the ileocaecocolic junction along with a perforation at the body of stomach, which lead to severe peritonitis. Timely diagnosis and surgical retrieval of foreign body saved the animal which had an uneventful recovery.

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