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Case Study

Surgical Management of Foreign Body in Dog

Gurucharan[1]* and Kankonkar Ashay[2]

[1]*Internee at Rajiv Gandhi Institute of Veterinary Education and Research, India*

[2]*M.V. Sc (Veterinary Surgery and Radiology), V.O. at Government Veterinary Hospital, Tonca, Miramar, Panjim, Goa, India*

***Corresponding Author:** Gurucharan, Internee at Rajiv Gandhi Institute of Veterinary Education and Research, India

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Abstract

A two-year-old Labrador retriever dog was presented with a history of anorexia, vomiting and irregular voiding habits since 2 days. On abdominal palpation, a solid mass was noticed. On radiographic examination, radio-opaque foreign body was noticed. Surgical intervention was carried out and few stones were retrieved post-operatively. Animal had an uneventful recovery.

Keywords: Dog; Foreign Body; Intestinal Obstruction; Caudal; Celiotomy

Introduction

Intestinal 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 [1]. Dogs are more likely to be presented with intestinal foreign bodies because of their slightly indiscriminate feeding habits, swallowing of incompletely masticated food and exposure to toys and dental chews [2]. Intestinal obstructions can be caused due to linear or round foreign bodies, strictures, adhesions, severe parasitic infestation, intestinal tumours etc. The procedure used for foreign body removal in dogs will depend on the nature and location of the obstruction. Intestinal foreign bodies can be diagnosed with imaging techniques like radiographs and endoscopy

Case History and Observations

A two-year-old Labrador retriever was presented to the Government Hospital with a history of anorexia, vomiting and irregular voiding habits since 2 days. On the day of presentation, palpation of the abdomen revealed pain and hard mass at mid-ventral abdomen. Animal was dehydrated by 8% and physiological parameters were within normal range.

Radiographic examination of lateral view of abdomen revealed radio-opaque foreign body (Fig.1). Based on history and radiographic examination, Enterotomy was performed.

Treatment and Discussion

Preoperatively animal was stabilized with fluid therapy, Inj. RL 300 ml I/V + Inj.

Amoxirum + Salbactam @ 12.5 mg/kg I/V

+ Inj. Meloxicam 1.5 ml I/V. Animal was premedicated with Inj. Atropine sulphate @ 0.045 mg/kg S/C. Sedation was induced with Inj. Xylazine @ 1mg/kg b.wt. + Inj. Ketamine @ 10 mg/kg b.wt. I/M

Maintenance by Inj. Xylazine + Inj. Ketamine I/V and Inj. Diazepam @ 0.5mg/kg b.wt. I/V.

The surgical site was prepared aseptically. A caudal midline celiotomy incision was made from umbilicus to pubis (Figure 2). The abdominal cavity was explored for obstructed intestinal loops. Distended intestinal loop was noticed at the jejunal level. The foreign body was palpated at the jejunum level (Figure 3) and a linear incision was made over it (Figure 4). The foreign body (stone) was retrieved (Figure 5). The whole intestine was checked for the presence of any more stones. The Enterotomy was closed using

Cushing's followed by Lembert's patterns using Vicryl 2-0. The abdominal incision was sutured in a routine manner using Vicryl 1-0. Subcutaneous layer was sutured using subcutaneous walking pattern. Skin was sutured by simple interrupted suture pattern using Polyamide 1-0. A tincture iodine seal was placed and bandaged.

The animal was kept off feed for a period of

7 days where daily I/V fluid supplementation was done using Inj. RL (300 ml I/V) + Inj. Amoxirum forte (Amoxicillin and Salbactam) 300 mg I/V + Inj. Tribivet (2 ml I/V) + Inj. Rantac 1ml S/C. Inj. Meloxicam 1.5ml I/V was given for 3 days. The animal recovered without any complications.

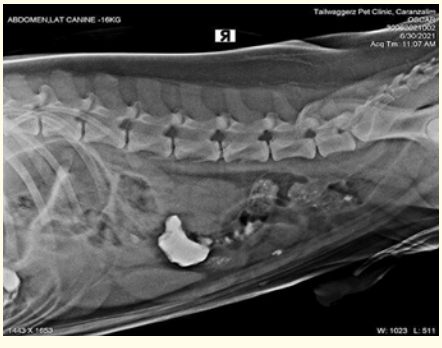

Figure 1: Lateral view of abdomen showing radio-opaque foreign body.

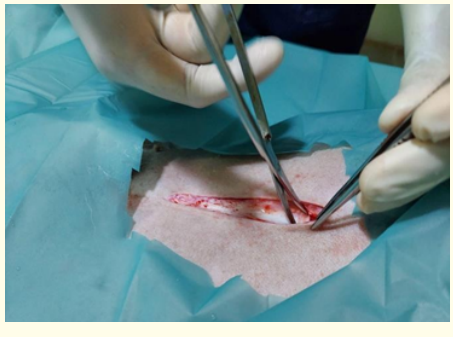

Figure 2: Caudal midline incision.

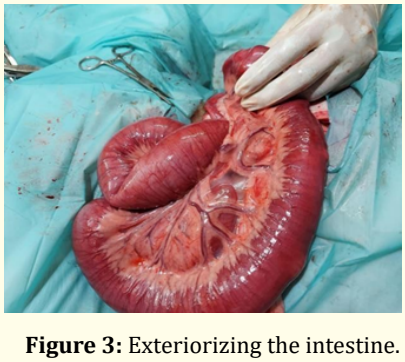

Figure 3: Exteriorizing the intestine.

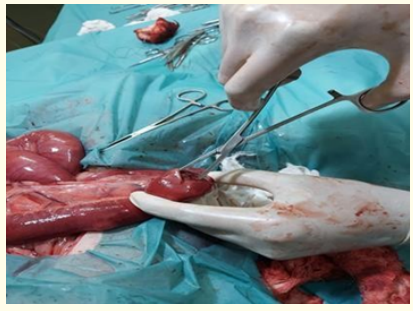

Figure 4: Incision made over the foreign body.

Figure 5: Retrieval of foreign body.

Figure 6: Foreign bodies.

Case Discussion

Based on history and clinical signs exhibited by the animal, radiographic examination was performed. The radiograph revealed multiple foreign bodies at the jejunal level of the small intestine. Hence, Enterotomy was performed and the foreign body was retrieved. The animal recovered without any post-operative complications.

Intestinal obstruction involves a complex interaction of local and systemic factors, which remain partly obscure. Life- threatening complications result because of fluid, acid–base, and electrolyte imbalances, hypovolemia, and toxaemia. Accumulating fluids come from two sources: an increased amount of secretion in the

upper gastrointestinal tract (saliva, bile, gastric, pancreatic, and small intestinal secretions) and retention of ingested fluids. Solute absorption is reduced because of lymphatic and venous congestion, increased intraluminal osmolality, and decreased enterocyte turnover rate. After 24 hours of obstruction, the distended bowel may lose its ability to absorb fluids, and local hypersecretion is observed.

Intraluminal fluid volume is increased as the obstruction becomes prolonged. In complete proximal intestinal obstructions, a large quantity of secretions and ingested fluids cannot establish contact with the jejunal and ileal mucosa for reabsorption. In distal intestinal obstructions, some fluid moves proximally by reverse peristalsis and reaches a non-distended intestinal loop, where normal absorption occurs [3].

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