

ENTEROANTOMOSIS FOR THE MANAGEMENT OF INTESTINAL OBSTRUCTION IN A DOG

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Introduction

Intestinal obstruction is a common clinical condition encountered in small animal practice. Intestinal foreign bodies may cause complete or partial intraluminal obstruction. The most frequently found gastro intestinal foreign bodies included bones, corn-cobs, stones, fruit pits, food packaging materials, children's chewing toys, bottle caps, fish hooks and sewing needles (Senapati *et al.*, 1997 and Sreenu and Kumar, 2006). Mechanical obstruction is the most common indication for intestinal surgery in dogs. Many animals that are presented with clinical signs consistent with obstruction but without diagnostic evidence (i.e., radiographs, contrast studies, ultrasound) of obstruction typically undergo surgical intervention only when medical management fails. The present paper describes the surgical management of intestinal obstruction in a German Shepherd dog that had ingested a piece of rubber ball.

Case History and Clinical Findings

A male German Shepherd dog aged 4 years was presented to the Division of Surgery, IVRI, with the history of vomiting, anorexia, dullness and blood tinge stool and weight loss for one week. The owner was unsure of ingestion of foreign bodies. Upon clinical examination rectal temperature, heart rate and respiratory rate were found within normal limits. Physical examination revealed presence of a hard mass in the intestines. Lateral and ventrodorsal abdominal radiographs were obtained which confirmed the presence of radio-opaque foreign body in the small intestine (Fig. 1). Based on history, physical examination of abdomen, clinical signs and survey abdominal radiography it was diagnosed as intestinal obstruction and the surgical correction was planned.

Treatment

Ventral midline was prepared aseptically for surgery. Dog was premedicated

with atropine-diazepam-pentazocine combination and general anesthesia was induced and maintained with 2.5% solution of thiopental sodium. A ventral midline laprotomy incision was given and the intestines were exteriorized. An intestine segment of about 8 inches containing foreign body was identified by palpation and discolouration of the intestines. The affected area of intestines was isolated and ligation of the arcuate branches was done along the mesenteric surface by taking suture bites around the mesenteric vessels immediately adjacent to the proposed transection sites (Fig. 2). Luminal contents were milked away from the area, and affected part of the intestine along with 2 or 3 cm of healthy tissue was clamped. The segment of intestine prepared for resection and anastomosis site was packed off from the peritoneal cavity by layer of gauze pads. Enterotomy at the jejunum was done to retrieve a piece of rubber ball causing obstruction (Fig. 3). Intestinal resection was done as there was necrosis of the intestine surrounding the obstructed mass and oblique end-to-end enteroanastomosis was performed to appose the resected ends of intestine (Fig. 4). The abdominal muscles were closed with 2-0 catgut. The skin was sutured with horizontal interrupted mattress using 2-0 polyamide.

Postoperatively the dog was treated with ceftriaxone 20mg/kg body weight and melonex 0.5 mg/kg body weight along with fluid therapy for 5 days. Sutures were removed on 11th day. Uneventful recovery was noticed.

Results and Discussion

Foreign bodies in the digestive tract apart from partial or complete obstruction lead to severe inflammation, mucosal laceration and pressure necrosis (Ettinger, 2000). Gastrointestinal obstruction also results in disturbances of fluid balance, acid-base status and serum electrolyte concentrations 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). Small intestinal

obstructions in dogs result from foreign bodies and the clinical signs are dependent on the site,



Fig 1: Lateral radiograph of abdomen showing intestinal obstruction due to a piece of rubber ball in the jejunum (arrow)



Fig 2: Intra-operative view of site of intestinal obstruction. Notice the necrotic areas of intestinal loops proximal and distal to obstruction



Fig 3: Retrieval of foreign body after antimesenteric enterotomy incision



Fig 4: Intra-operative view showing enteroanastomosis

severity and cause of obstruction (German, 2005). Physical examination and abdominal palpation are of prime importance in all cases and help to detect the site of obstruction however radiography may provide confirmatory diagnosis. Enterotomy is the surgical procedure of choice to treat intestinal obstructions. Fluid therapy provided post-operatively helped in overcoming dehydration and electrolyte imbalance and animal recovered without any complications.

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