

SURGICAL MANAGEMENT OF CAECAL FAECOLITHIASIS IN A NON-DESCRIPT DOG

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A non-descript bitch with history of intermittent vomiting and absence of defecation which was diagnosed as having impaction of the caecum with fecolith based on the clinical findings and radiographic studies. Exploratory laparotomy was performed which confirmed it to be large intestinal impaction with food material. The dog made uneventful recovery from the procedure, showing no recurrence of the clinical signs.

Introduction

Any interference either mechanical or functional with progression constitutes intestinal obstruction. Intramural obstruction of the intestinal lumen may be as a result of bolus of incompletely digested food, dehydrated intestinal contents (faeces) or an ingested foreign body due to indiscriminate feeding habits of pet animals (Ellison, 1990). Affections of caecum are rarely reported in the dog and majority of cases include caecal inversion (Leighton, 1983; Miller *et al.*, 1984; Clark and Pavletic, 1992), caecal dilation (Le Roux, 1962), caecocolic intussusception (Lewis and Ellison, 1987), caecal perforation (Moore and Robinette, 1987), neoplasia (Gibbons and Murtaugh, 1989; Kapatkin *et al.*, 1992) and caecal impaction (Stockman and Stockman, 1961; Wells *et al.*, 1995).

There are few reports of caecal impaction due to impacted faeces reported in veterinary literature and various clinical signs associated with this condition include vomiting, diarrhoea and faeces which may contain mucus or blood. In some clinical situations, abdominal palpation may reveal a firm and painful mass. Radiographs, with or without contrast material can help the clinician in diagnosing caecal impaction. If the source of impaction is confirmed, exploratory surgery is indicated and in cases of neoplasia or caecal inversion, typhlectomy may be performed while foreign bodies can be removed through typhlotomy (Aronsohn, 1993). This case report describes the clinical findings and surgical management of a caecal impaction in a dog due to faecolithiasis.

Case History

A 4 year old female dog of non-descript breed, weighing about 10 kg was presented to the Referral Veterinary Polyclinic, IVRI, Izatnagar

with the complaint of vomiting, anorexia, dullness and absence of defecation for 4 days. The animal was already being treated by a local veterinarian with unsuccessful attempts to control the emesis and pass faeces even after administration of enema. The clinical examination of the animal revealed sunken eyeballs, marked tenting of skin on the back region along with subnormal temperature (36.6 0C), tachycardia (140 beats per minute) and tachypnea (37 breaths per minute). Upon abdominal palpation, marked distension along with a palpable mass in the caudal abdominal area was observed. The animal was subjected to right lateral abdominal radiograph which demonstrated the presence of 2 large masses of increased radiodensity in the region of large intestine along with several gas filled loops of small intestine. The generalized distension of the abdominal cavity was also appreciable (Fig. 1). Based on the history, clinical findings and radiographic examination, lower intestinal obstruction was considered most likely and it was decided to perform surgery to remove the offending object.

Surgical management

Preoperative adequate quantity of intravenous fluid (DNS 350 ml), corticosteroid (dexamethasone 1 ml), antiemetic (ondansetron 4mg/ kg), broad spectrum antibiotic (ceftriaxone 25 mg/ kg) and analgesic (meloxicam 0.5 mg/ kg) was administered for stabilization of the patient. The ventral midline area from xiphoid region to pubis was prepared aseptically for the surgery.

The bitch was premedicated with atropine sulphate @ 0.04mg/ kg body wt. i.m. and diazepam @1 mg/kg body wt. i.v. followed 10 minutes later by ketamine @ 7.5 mg / kg body

wt. i.v. With the animal restrained in dorsal recumbency, the palpable mass was grossly identified (Fig. 2) and an incision of about 2 inches length was given in the caudal abdominal area over the palpable mass. The impacted caecum (Fig. 3) was brought out of the abdominal cavity and packed off with saline soaked gauze pad to prevent accidental spillage of intestinal contents. An enterotomy incision (typhlotomy) of 1 inch length was made in the antimesenteric border (Fig. 4) and the faecolith was removed out by slightly pushing the caecal contents in a milking pattern (Fig. 5). The other mass was also removed through the same incision site in a similar manner. The edges of the enterotomy incision were mopped with sterile gauze and suturing of the intestine was done by Lembert pattern of inversion suture using 3-0 chromic catgut (Fig. 6). The abdominal cavity was flushed with diluted solution of povidone iodine. The abdominal incision was sutured followed by skin closure in a routine manner.

Postoperatively the animal was prescribed ceftriaxone for 5 days while 5% DNS (250 ml b.i.d.) and analgesic meloxicam was administered for 3 days. Additionally, oral administration of laxative (cremaffin plus 2 tsf b.i.d.) was prescribed for 10 days. The suture line was dressed with 5 % povidone iodine solution twice daily for 7 days and it was advised to put a protective elizabethan collar over the neck of the animal to prevent self mutilation. Strict dietary rest was advised for 3 days followed by feeding of milk and gruel from 4th day onwards and then gradually changing the diet to normal food.

Two caecoliths with small vegetable fibres protruding out from the surface were removed successfully leading to relief from the obstruction. The animal showed progressive signs of improvement under the umbrella of therapy given in the post operative period. The skin sutures were removed 10th day postoperatively and the animal made an uneventful recovery.



Fig. 1: Radiograph showing 2 large radio dense mass in the region of large intestine



Fig. 2: Grossly distended intestinal segment isolated manually before skin incision



Fig. 3: Intraoperative view showing extremely distended caecum



Fig. 4: Surgical incision over the impacted caecal segment



Fig. 5: Faecolith being removed through typhlotomy incision



Fig. 6: Typhlotomy closure by Lembert suture using catgut 3-0

Discussion

Caecal impaction is rarely encountered in small animals and there are very few reports which are not related to neoplastic conditions of caecum (Stockman and Stockman, 1961; Wells *et al.*, 1995) with acute clinical duration of a few days to four weeks. The disease course of this case was also considered to be acutely progressing with clinical signs of retching, vomiting, lethargy, weight loss and absence of defecation consistent with intestinal tract obstruction for 4 days. Caecal enterolithiasis in a miniature poodle has also been reported by Lamb *et al.* (1991) describing the diagnosis of calcification on abdominal radiographs, but only a scant clinical history for this case has been provided.

The histopathological examination of the caecal specimen in this case was not carried out in an attempt to find the underlying cause for the caecal impaction. Wells *et al.* (1995) have suggested that a motility disorder is the most probable cause of faecal retention in a caecum even if the caecum is histopathologically normal. However, Lamb *et al.* (1991) have suggested that in young dogs residual caecal meconium may provide a nidus around which a calcified enterolith could develop. In contrast to these findings, the impacted caecal contents retrieved from this case consisted of vegetable matter and some undigested food substances with absence of any signs of calcification.

In conclusion, this case supports the findings that a caecal impaction lesion will produce clinical signs associated with both the

small and large intestine. The caecal lesion may produce minimal obstruction to the passage of material through the gastrointestinal tract as was the case with this dog or, as previously reported, it may lead to a complete intestinal obstruction at the level of the caecocolic orifice giving rise to more severe clinical findings. As in previous reports of caecal impaction associated with fecal material, no underlying etiology for the condition could be determined.

References

- Aronsohn, M. (1993). Large Intestine. *In:* Textbook of Small Animal Surgery, 2nd edn., Slatter, D.H. (Ed). W. B. Saunders, London. pp. 613-627.
- Clark, G.N. and Pavletic, M.M. (1992). Typhlectomy in dogs using a stapling instrument. *J. Am. Anim. Hosp. Assoc.*, 28: 511-517.
- Ellison, G. W. (1990). Enterotomy. *In:* Current Techniques in Small Animal Surgery. 3rd edn., Bojrab, J. (Ed). Lea and Febiger, Philadelphia. p 249.
- Gibbons, G.C. and Murtaugh, R.J. (1989). Caecal smooth muscle neoplasia in the dog: report of 11 cases and literature review. *J. Am. Anim. Hosp. Assoc.*, 25: 191-197.
- Kapatkin, A.S., Mullen, H.S., Matthiesen, D.T. and Patnaik, A.K. (1992). Leiomyosarcoma in dogs: 44 cases (1983-1988). *J. Am. Vet. Med. Assoc.*, 201: 1077-1079.
- Lamb, C.R., Kuene, L.J. and McMillan, M.C. (1991). Diagnosis of calcification on abdominal radiographs. *Vet. Radiol.*, 32:

- 211-220.
- Leighton, R.L. (1983). Caecal inversion in dogs. *Vet. Med. Small Anim. Clinician*, 78: 521-524.
- Le Roux, P.H. (1962). Dilatation of the caecum in dogs. *J. S. Afr. Vet. Med. Assoc.*, 33: 73-76.
- Lewis, D.D. and Ellison, G.W. (1987). Intussusception in dogs and cats. *Compend. Cont. Edu. Pract. Vet.*, 9: 523-534.
- Miller, W.W., Hathcock, J.T. and Dillon, A.R. (1984). Caecal inversion in eight dogs. *J. Am. Anim. Hosp. Assoc.*, 20: 1009-1013.
- Moore, M.P. and Robinette, J.D. (1987). Caecal perforation and adrenocortical adenoma in a dog. *J. Am. Vet. Med. Assoc.*, 191: 87-88.
- Stockman, V. and Stockman, M.J.R. (1961). Caecal impaction in the dog. *Vet. Rec.*, 73: 337-339.
- Wells, K.L., Bright, R.M. and Wright, K.N. (1995). Caecal impaction in a dog. *J. Small Anim. Pract.*, 36: 455-457.

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