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Surgical management of linear foreign body in a Labrador retriever dog

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Abstract
A Male Labrador Retriever dog was presented to the Veterinary College Hospital with a history of anorexia, dyschezia, vomition and gradual debility. It was diagnosed as intestinal obstruction due to lineal foreign body based on signs, palpation and contrast radiographic examination. A mid ventral laparo-enterotomy-gastrotomy was performed and retrieved a cloth piece. Timely surgical intervention and good postoperative therapy resulted in uneventful recovery.

Keywords: Labrador retriever dog, contrast radiography, linear foreign body, laparo-enterotomy-gastrotomy

1. Introduction
Dogs may ingest various linear foreign bodies like ropes, threads, cloth pieces, wires, etc. because of their indiscriminate feeding habits [1]. Sometimes this might result in partial or complete intestinal blockage [2]. Many a times the linear cotton or nylon string will get tethered at base of tongue and its free end gradually passes into the stomach and intestines, where it leads to folding or plication of intestines in accordion fashion. Obstruction due to linear foreign bodies is one of the important surgical affection of intestines that are very difficult to diagnose therefore careful clinical, physical, radiological and or ultrasonographic examination of dog is necessary. Affected dogs will go down in condition, become anorectic, dehydrated and vomitions are obvious. Surgical retrieval of foreign body is the only option in such cases [3]. In such cases, multiple enterotomies at different sites and gastrotomy have to be performed to remove foreign body completely. Electrolyte imbalance is another critical parameter that has to be taken care of. In the present report, we put forth successful surgical management of complete intestinal obstruction due to a linear foreign body (a cloth piece) in a Labrador Retriever dog.

2. Materials and Methods
A 5 year old male Labrador Retriever dog weighing about 30 kg, was suffering from continuous vomition, anorexia, lethargy, dyschezia, dehydration, loss of body weight since seven days was referred to the Department of Veterinary Surgery and Radiology, Veterinary College, Hebbal, Bengaluru. Clinically, it was dull, dehydrated with pale mucous membranes and all physiological parameters were in normal range. A semi hard mass could be palpable in the cranial abdominal region which evinced painful reflex. Plain radiography revealed a suspicious mass in intestines and distended loops of intestines but not confirmative, hence, contrast radiography using barium meal was done which confirmed a linear foreign body obstructing the lumen (Fig.1). Hematological and biochemical parameters were within normal range except elevated total leukocytic counts. An emergency exploratory laparotomy was planned and performed.

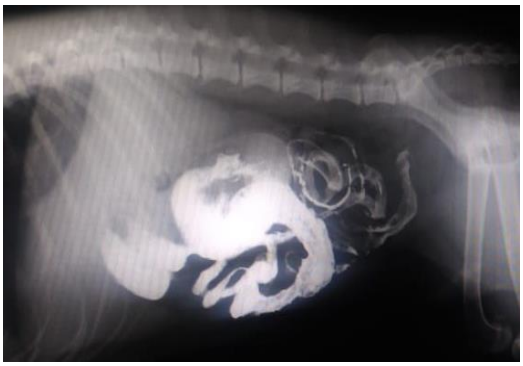

Fig 1: Photograph showing a linear foreign body with barium contrast

3. Results and Discussion

The dog was stabilized with Dexamethasone @ 1 mg/ kg, RL 500 ml, DNS 500 ml and Ceftriaxone @ 20 mg/ kg I/V prior to surgery. Premedicated with Atropine sulphate @ 0.04 mg/ kg S/C and sedated with Xylazine @ 1 mg/ kg I/M. General anaesthesia induced with Propofol and maintained with 1.5% Isoflurane inhalation anesthesia. The ventral abdomen was prepared aseptically by restraining the animal in dorsal recumbency. With a mid ventral coeliotomy entered into the abdominal cavity and exteriorized obstructed intestinal loop gently to the incision site. A congested serosa was found near the site of intestinal obstruction. Enterotomy was performed at the antemesentric border to remove the obstructed foreign body (Fig 2) and it was found to be a cloth piece (Fig 3) but not able o remove it completely because it was continuing cranially.

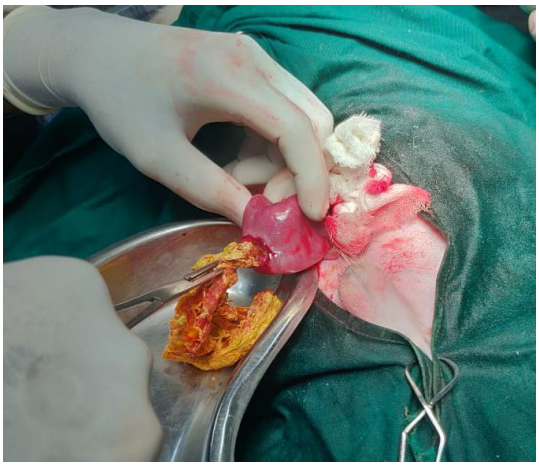

Fig 2: Photograph showing retrieval of foreign body through enterotomy.

Fig 3: Photograph showing retrieved foreign body.

The enterotomy wound was irrigated with NS and then sutured in single layer by interrupted suture pattern but knots were placed inside the lumen using chromic catgut no. 2-0. Further the search followed cranially towards the stomach. Upon thorough examination, something hard palpated in the stomach. Then gastrotomy was performed to remove the remaining foreign body and incision was closed by cushing followed by lambert pattern with chromic catgut no 2-0. Abdomen was flushed with warm normal saline. Linea alba was closed using polyglactin 910 no. 1 in simple interrupted pattern followed by subcutaneous and cutaneous sutures routinely. Postoperatively, fluids therapy, inj. RL 500 ml, inj. DNS 500 ml and inj. Metronidazole 50 ml BID along with Ceftriaxone plus Tazobactum @ 20 mg/kg BW I/V and Meloxicam @ 0.3 mg/kg body weight S/C. Oral feeding was avoided for 3 days. Animal passed soft stools on 3rd post operative day and recovered completely by 10th post operative day.

Ingestion of linear foreign bodies was a common finding in dogs owing to their indiscriminate feeding habits. The various clinical signs produced in this case were anorexia, vomition, gradual debility, weakness, dehydration, pain on palpation of abdomen and dyschezia were also reported earlier [4, 5]. Survey radiograph could not confirm any foreign body except segmental dilation of intestines because of its radiolucency. Hence contrast gastro-enterogram using barium meal was taken which confirmed the presence of a linear foreign body. It's not a lengthy one and not involved much of the loops of intestines, hence, intestinal plication was not observed as in the case of a stringy foreign body [6]. Site of obstruction was jejunal loops, which was the second most common site of obstruction [7]. The obstructed intestinal part was healthy with rupture at only one site hence only enterotomy was done [8] and the rupture was repaired. But in protracted cases of intestinal obstruction enterectomy and anastomosis was suggested [3].

4. Conclusion

A case of successful surgical management of linear foreign body in intestines in a dog is presented. Timely presentation of the animal to clinic and asceptic surgery will result in proper recovery of animal.

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