CASE REPORT
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# THORACIC OESOPHAGEAL FOREIGN BODY AND ITS SURGICAL RETRIEVAL THROUGH GASTROTOMY IN AN INFANT PUP

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## ABSTRACT

A four week old male crossbred pup was presented to Teaching Veterinary Clinical Complex, Mannuthy with a history of swallowed bone piece. Direct thoracic radiograph revealed radio-opaque mid-oesophageal foreign body. Considering the size of the bone piece decided to perform gastrotomy combined with stomach tube passage. The bone piece was successfully retrieved and the animal had an uneventful recovery.

**Keywords** : Canine, Mid-oesophageal foreign body, Gastrotomy

## INRODUCTION

Oesophageal foreign bodies are common in dogs due to voracious feeding habits. According to Thompson *et al.* (2012) the most common foreign body retrieved from the oesophagus is bone piece. Too much manipulation to retrieve the foreign body can leads to oesophageal perforation and oesophagitis. Bones are not easily dislodged from the site of obstruction and the spasm of the oesophageal musculature also prevent the movement (Tams and Spector, 2011). The common clinical signs of obstruction of oesophagus includes restlessness, distress, drooling, gagging and regurgitation. In severe cases perforation of the oesophagus with mediastinitis, pleuritis and pneumothorax are also possible. The degree of oesophageal mucosal damage depends upon the duration of the foreign body entrapment (Guilford and Strombeck, 1996). In this paper thoracic-oesophageal foreign body and its successful surgical retrieval via gastrotomy in an infant pup is kept on record.

## CASE HISTORY AND OBSERVATION

A four week old male crossbred pup weighing 1 kg was presented to Teaching Veterinary Clinical Complex, Mannuthy,

Kerala with a history of ingestion of bone piece on the previous day. Animal could not take any food after the incident and showed severe retching. On clinical examination all the physiological and biochemical parameters were found within the normal limit. Thoracic radiogram revealed a radio-opaque object with mineral opacity in the mid-oesophageal region towards the base of heart (Fig.1). It was decided to retrieve the foreign body by gastrotomy, as oral approach was not suitable.

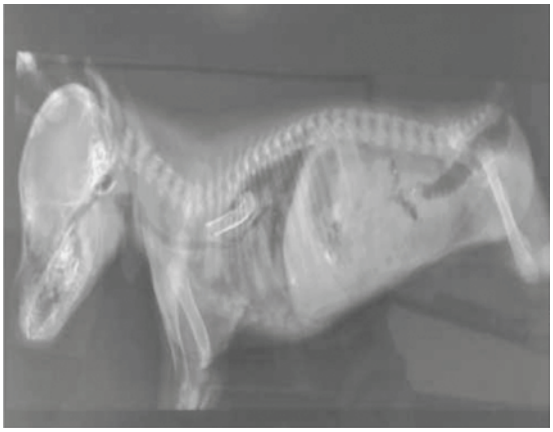

Fig. 1. Foreign body towards the heart base

## TREATMENT AND DISCUSSION

Anesthesia was induced with isoflurane @ 3% in oxygen with a face mask. Animal was placed in right lateral recumbency and prepared the left paracostal region for aseptic surgery. Anesthesia was maintained with isoflurane @ 1.5% to 2% in oxygen. Through a left paracostal incision, the stomach was exteriorised from the abdominal cavity. A linear incision was made in the body of the stomach. By using a Doyen's clamp in a retrograde manner through the stomach, grabbed the foreign body located in the oesophagus and exerted gentle traction. Simultaneous application of force proximal to the foreign body by using a stomach tube made successful retrieval of the lodged bone piece through the stomach. The abdominal cavity was lavaged with normal saline. Gastric incision was closed by Connell suture pattern followed by Lembert pattern using polyglactin -910 size 3-0. Abdominal incision was closed in routine manner.

Fig. 2. Retrieval of foreign body through gastrotomy

Fig. 3. Pup and foreign body after surgery

Post-operatively the pup was treated with subcutaneous fluids, B complex vitamins, analgesic for three days and antibiotic inj. ceftriaxone @ 20 mg/ kg body weight once daily intramuscularly for seven days. For first three days post-surgery animal was strictly maintained nil per os. Afterwards advised to increase the food intake gradually starting with liquids and semisolid diets. Animal was resumed to normal food intake after seven days. Sutures removed on tenth post-operative day and the pup had an uneventful recovery.

Bones are the most common oesophageal foreign bodies reported and fish hook, raw hide, pieces of plastic or metal are also found (Sale and William, 2006). Clinical signs include regurgitation or vomiting, anorexia, salivation and signs of depression. In this case the pup was showed severe retching and difficulty for swallowing. Sharp foreign bodies cause esophageal perforation, pneumomediastinum, pneumothorax, mediastinitis, pleuritis, pyothorax, mediastinal abscess, bronchoesophageal or tracheoesophageal fistulas and respiratory distress (Parker *et al,* 1989). Normal anatomical narrowing of the oesophagus occur at four points include upper oesophageal sphincter, the thoracic inlet, the heart base and the distal oesophagus just proximal to the gastro esophageal junction (Tams and Spector, 2011). The heart base portion of oesophagus is the site of obstruction in present case. According to the study of Thompson *et al.* (2012) the most common site of oesophageal obstruction is the heart base and the diaphragm. Diagnosis is mainly based on the history, clinical signs and radiological evaluation.

Surgical technique employed depends on the location, nature of the foreign body and availability of appropriate instruments. If the site of obstruction is more proximal, suitable forceps can be used to retrieve the foreign body. If this attempt fails, gently pushing the obstructing material into the stomach can be tried. Similar technique of pushing and traction was employed in the present case. The acidic pH in the stomach will digest the organic material. If the foreign body is not removed by firm traction through the pharynx, surgical intervention is required (Buback, 2011). In the present case, foreign body could not be retrieved through the oral cavity. So performed gastrotomy, traction with a Doyen's clamp and application of gentle pressure with a stomach tube on the foreign body, led to successful retrieval of the foreign body.

## SUMMARY

Surgical retrieval of a mid-oesophageal foreign body in an infant pup was performed successfully.

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