

ENDOSCOPIC RETRIEVAL OF THORACIC OESOPHAGEAL FOREIGN BODY IN A TWO-MONTH-OLD NON-DESCRIPT PUP – A CASE REPORT

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[Received: 20.01.2023; Accepted: 16.05.2023]

{DOI 10.29005/IJCP.2023.15.1.67-69}

A 2-month-old female nondescript pup was presented with a history of regurgitating food contents. On general clinical examination, the pup was dull and depressed. Radiographic examination revealed the presence of an obstructing foreign body at the base of the heart. An endoscopic examination was performed to confirm and retrieve the foreign body under general anaesthesia using endoscopic forceps. The animal made an uneventful recovery.

Keywords: Pup, Regurgitation, Oesophageal foreign body, Endoscopy, Thoracicoesophagus.

Oesophageal foreign bodies (EFB) are one of the common causes of regurgitation in animals. Young animals are more prone to this condition due to their playful and gulping feeding habits. The most common site of oesophageal obstruction in dogs is at the distal oesophagus, near the base of the heart (Burton *et al.*, 2017; Thomas *et al.*, 2012). Dogs with acute clinical signs, including retching, vomiting, restlessness, gagging, ptyalism, respiratory distress, and dysphagia, should be overlooked for EFBs. Bone wastes, including mammalian ribs and chicken waste, are the most common foreign materials obstructing the oesophagus in small animal practices (Barash *et al.*, 2022). Other foreign materials causing obstruction include toys, fish hook, pin pong balls, treats, etc.

The obstructing foreign body could lead to the entrapment of food particles leading to oesophagitis, ulceration, perforation, pneumomediastinum, and pneumothorax (Doran *et al.*, 2008). The secondary complications include oesophageal strictures and broncho-oesophageal fistula (Deroy *et al.*, 2015). The chance of infection and further associated complications are directly related to the delay in foreign body removal. Endoscopy is a golden tool widely recommended for retrieving foreign bodies in dogs (Burton *et al.*, 2017).

Case history and Observations

A two-month-old female nondescript pup weighing 1 kg was presented to the surgery unit, Referral Veterinary Polyclinic, IVRI, Izatnagar, with a history of regurgitation of food contents for two days. On general clinical examination, the pup was dull and depressed and exhibited pain on palpation of the oesophageal region. However, the physiological parameters were within the normal range. The owner suspected that the pup had swallowed chicken waste two days before. On survey radiographic examination, a radiopaque obstructing foreign body was noticed at the base of the heart in the thoracic region of the oesophagus (Fig. 1a). The animal was subjected to emergency endoscopy examination for further confirmatory diagnosis and treatment (Fig. 1b). The pup was premedicated with atropine (0.045 mg/kg BW) subcutaneously and butorphanol (0.02 mg/kg BW) intramuscularly. Anaesthesia was co-induced with midazolam (0.2 mg/kg BW) and propofol (to the effect) and maintained with propofol intravenously. Endoscopic examination revealed obstructing foreign body in the thoracic oesophagus at the base of the heart (Fig. 1c). The object was identified as bone waste and removed using endoscopic forceps (Fig. 1d).



Fig. 1a: Lateral radiograph revealed the presence of obstructing EFB at the base of the heart



Fig. 1b: Endoscopic examination to confirm and retrieve the EFB



Fig. 1c: Endoscopic examination spotted the obstructing EFB



Fig. 1d: The retrieved EFB identified as a bone piece

Results and Discussion

The pup made an uneventful recovery. EFB obstruction is considered a medical and surgical emergency, irrespective of the etiology. The fatality rate of endoscopic foreign body retrieval is 1.5%, and that of surgical retrieval varies between 7-80%. The duration and nature of clinical signs also determine the chances of survival. The complications associated with endoscopic retrieval of foreign bodies include oesophagitis, mucosal ulceration, haemorrhage, necrosis, perforation, pneumothorax, pneumomediastinum, pyothorax, oesophageal stricture, and broncho-oesophageal fistula. Oesophageal stricture could be the rarest complication caused by foreign bodies.

Surgical retrieval is mostly cumbersome and is often associated with complications. Dogs presented with a foreign body lodged in the caudal oesophagus are more prone to oesophagitis and associated complications as compared to dogs having a foreign body in the cranial oesophagus as also reported by Barash *et al.*, 2022. In addition, repeated procedural complications often increase fatality rates. A contrast radiographic study of the oesophagus could be performed in the case of non-perforating EFBs. Gastric retrieval of EFB can be considered after advancement if endoscopic retrieval is unsuccessful as also recommended by Barash *et al.*, 2022. In the present case, the prompt diagnosis and apt choice of treatment led to the successful recovery of the pup.

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