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Successful removal of oesophageal foreign body in a cat

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Abstract

A three-year-old cat, showing symptoms of dysphagia, retching, ptyalism, lack of appetite, and evident discomfort, was presented to the Veterinary Clinical Complex, CVSc and AH, OUAT, Bhubaneswar. Medical history revealed that the cat had been fed chicken bones two days prior to the consultation. A comprehensive physical examination confirmed the presence of a foreign body obstruction in the proximal-cervical oesophageal region. Radiographic images revealed a distinct and highly visible foreign body of significant radiodensity lodged in the proximal cervical oesophagus, leading to the diagnosis of an oesophageal obstruction. Manual extraction of the foreign body was possible using throat forceps under general anaesthesia.

Keywords: Oesophageal obstruction, cat, plain radiography

Introduction

In cats, oesophageal obstruction is less frequently observed when compared to other types of gastrointestinal obstructions (Bebchuk, 2002) [1]. Cats, known for their playful nature, often engage with toys and small objects, making them susceptible to the potential lodging of foreign bodies in their oral cavity or oesophagus. A diverse array of foreign bodies has been identified in such cases, with needles, fish bones, and other types of bones being the most frequently encountered objects (Tams, 2003) [2]. If a foreign body remains lodged in the oesophagus for an extended period, repeated peristaltic waves can exert pressure on the mucosa, submucosa, and outer layers of the oesophagus, leading to necrosis at the points of contact. The extent of secondary oesophageal damage is influenced by the shape, size, and duration of contact between the foreign object and the oesophageal mucosa (Johnson and Sherding, 2000; Gualitiere, 2001) [3, 4]. Traction using forceps can be a viable option for extraction when the foreign body is located in the proximal part of the digestive tract, such as the pharynx and proximal oesophagus. Endoscopy provides the advantage of visualising and precisely locating the foreign body, enabling extraction in the majority of cases without the need for surgical intervention.

Case History and Diagnosis

A three-year-old cat weighing 3 kg was brought to the Veterinary Clinical Complex, CVSc and AH, OUAT, Bhubaneswar with symptoms of dysphagia, retching, ptyalism, lack of appetite, and evident discomfort. Medical history revealed that the cat had consumed chicken bones two days prior to the consultation. During the physical examination, the cat appeared lethargic, depressed, and dehydrated, with a rectal temperature of 103.2 °F. Palpation of the neck region revealed a tender, solid object situated in the upper part of the neck. Subsequent lateral cervical radiography confirmed a foreign body obstruction in the proximal cervical oesophagus and there was a bone-like opacity obstructing the proximal oesophageal lumen (Fig.1).



Fig 1: Lateral radiograph showing the foreign body

Surgical Treatment

General anaesthesia was achieved using cocktail mixture of atropine (0.04 mg/kg BW), xylazine HCl (1 mg/kg BW), and ketamine HCl (10 mg/kg BW). Both the jaws were kept in extended position to locate the foreign body inside pharyngeal cavity. Manual extraction of the foreign body was tried with the help of throat forces, but was unsuccessful due to invisibility. Hence the neck region was prepared aseptically for surgical removal of the foreign body. But before surgical incision, the cat showed the signs of vomiting and the foreign body displaced cranially towards throat which was visualised through C-ARM. Again another manual attempt was done for removal of the foreign body through forceps and was successful. The foreign body was a flat bone piece with sharp edges (Fig.2). Antibiotics Ceftriaxone @ 20 mg/kg body weight IM for 5 days, analgesics Meloxicam @ 0.2 mg/kg body weight IM for 3 days and fluid therapy for 3 days followed by liquid diet were advised to overcome the possible injury of oesophagus by the sharp edges of the foreign body.



Fig 2: Removed foreign body

Conclusions

The anatomical feature of the cat oesophagus is mainly responsible for different types of foreign body obstruction. The feline oesophagus has several sharp angles and it is the major factor for causing foreign body obstruction. Radiographic examination is the main diagnostic modality to determine the lodgment site of radiopaque foreign body (Abd Elkader *et al.*, 2020) ^[5]. Lack of immediate medical intervention may lead to pleural inflammation, oesophagitis, aspiration pneumonia, severe stress and mortality (Aiello and Moses, 2016; Sahu *et al.*, 2019; Satapathy *et al.*, 2022) ^[6, 7, 8]. One potential approach is to attempt foreign body removal using forceps. In the present case, the foreign body was entrapped inside the oesophagus due to its flat structure. First manual attempt was unsuccessful but in the second attempt the foreign body was removed. It was possible due to relaxation of the muscles and cranial movement of the foreign body. Healing of a wound requires a well-orchestrated integration of complex biological and molecular events (Das *et al.*, 2015) ^[9]. As there was possibility of traumatic injuries by the sharp bony foreign body, the cat was kept in antibiotic coverage with fluid therapy followed by liquid diet and it recovered well.

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