Case Report

Surgical Retrieval of Esophageal Foreign Body in a Dog – A Case Report

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Abstract

A two and half month old Nondescript male puppy was presented with the clinical signs of hyper salivation, dysphagia, restlessness, and respiratory distress. A lateral cervical survey radiograph revealed a radio dense foreign body in the caudal cervical esophageal region. Esophagotomy was performed to remove the foreign body under general anesthesia. Esophagotomy wound was healed well and animal recovered uneventfully.

Key words: Bone Piece, Choke, Dog, Esophagotomy

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Introduction

Esophageal obstruction by the foreign body is a common, and emergency condition in dogs if unattended leads to serious complications like aspiration pneumonia, esophageal perforation, esophagitis etc. Mostly, esophageal foreign bodies lodges at the point of narrowing like the cranial esophageal sphincter, thoracic inlet, above the base of the heart, and at the caudal esophageal sphincter various foreign bodies include bones, balls, fishhooks, raw hide, wooden sticks, toys, pieces of plastic or metal etc. (Wyatt and Barron, 2019 and Thompson *et al.,* 2012). The affected dog shows clinical signs like retching, hyper salivation, dysphagia, respiratory distress, restlessness etc. Radiography or endoscopic examination not only aids in diagnosing the condition, but also helps to locate the position of the foreign body (Leib and Sartor, 2008). Surgical removal is indicated when endoscopic removal fails (Parker *et al.,* 1989 and Andrew, 2003), or when forcing forceps extraction represents a high risk of causing or enlarging an esophageal perforation (Andrew, 2003 and Leib and Sartor, 2008).

Case History and Observation

A two and half month old Nondescript male puppy was presented to Veterinary College Hospital, Hebbal, Bengaluru with the clinical signs of hyper salivation, retching, restlessness and respiratory distress. A hard, mass was palpable at the caudal cervical region. A lateral survey cervical radiograph revealed a radio dense, irregular margin, foreign body in the caudal cervical esophageal region (Fig. 1).

Fig. 1: Lateral cervical radiograph showing foreign body in caudal cervical esophagus

Based on the history, clinical signs and radiographic evidence it was diagnosed as choke and decided to perform an emergency esophagotomy.

Treatment and Discussion

The puppy was stabilized with fluids and inj. Dexamethasone. The preemptive analgesic inj. Meloxicam @ 0. 2mg/kg B.wt S/C and antibiotic Ceftriaxone @ 20 mg/kg B.wt S/C was given. It was premeditated with inj. Atropine sulphate @ 0.04 mg/kg B.wt S/C and inj. Xylazine Hydrochloride @ 1 mg/kg B.wt I/M as preanesthetic. After 10 minutes, anesthesia was induced using Propofol @ 5 mg/Kg B.wt intravenously and maintained with 1.5% Isoflurane inhalation anesthesia. The ventral region of neck is prepared aseptically and animal positioned on dorsal recumbency with neck extended. Midline skin incision was made on the middle of the cervical region and upon proper dissection, the esophagus having the foreign body is brought at the surgical site. An incision performed on the esophagus exactly at the mass and exposed the lumen. With the help of Allies forceps, the mass was removed and it was a bone piece (Fig. 2). The esophageal wound lavaged with Normal Saline and observed carefully for any lacerations or perforations in the esophageal mucosa. The mucosa and submucosa are closed using Vicryl No. 2-0 in simple interrupted pattern with knots inside the lumen. Tunica muscularis and adventitia opposed with Vicryl No. 2.0 in simple continuous sutures.

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Fig. 2: Photograph showing retrieved foreign body (bone piece)

Subcutaneous tissue opposed with simple continuous sutures by Cromic Catgut No. 1 and finally the skin with horizontal mattress by the Polyamide black No. 1-0. The surgical wound was dressed and bandaged. Postoperatively animal was kept on fluid therapy for 3 days, liquids and semisolid food was given for next 2 days and later with regular solid diet. Inj. Ceftriaxone + tazobactam @ 20 mg/kg B.WT daily for 7 days were given. The skin sutures were removed on 10th postoperative day and the puppy was recovered uneventfully without any complications.

Esophageal obstruction is an emergency condition and must be attended as early as possible. Esophageal obstruction due to foreign bodies were majorly found to be bones and bone fragments (Ryan and Greene, 1975, Houlton *et al.,* 1985, and Moore, 2001). Similar finding was recorded in the present case. Most commonly, obstruction occurs at various sites like cranial esophageal sphincter, thoracic inlet, above the base of the heart, and at the caudal esophageal sphincter was also been recorded (Wyatt and Barron, 2019). Whereas in the present case, the foreign body was struck at caudal cervical region. Almost 99.6% esophageal foreign body cases were diagnosed by plane or contrast radiography (Brigitte *et al.,* 2018). Endoscopic diagnosis was more advantageous, as it allows directly visualization of the type of foreign body, exact location and condition of the esophageal mucosa (Florence *et al.,* 2010). But this case was diagnosed based on palpation, and the survey lateral cervical radiography. Major complications associated with esophageal obstruction were regurgitation, esophagitis, esophageal perforation, respiratory distress and finally death of the patient (Spielman *et al.,*1992 and Leib and Sartor, 2008). In the present case, foreign body had sharp edges and it could not be removed manually as it may damage the esophageal mucosa leading to esophagitis and esophageal perforations, hence it was removed surgically similar to Rousseau *et al.*, 2007. Postoperative complications like esophagitis, esophageal stricture, esophageal perforation or aspiration pneumonia can be noticed often (Moore, 2001 and Rousseau *et al.*, 2007), but in this case no such complications were noticed after esophagotomy and the pet recovered uneventfully.

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Conclusion

Successful surgical management of uneven sharp bony fragment obstructing caudal cervical esophagus in a two and half month old non-descript puppy was reported.

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