SURGICAL MANAGEMENT OF OESOPHAGEAL FOREIGN BODY OBSTRUCTION IN A PUP

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INTRODUCTION

Oesophageal obstruction by foreign body is common in canines and can cause potential complications and even death (Spielman *et al*., 1992). The frequently encountered foreign bodies in dogs are bones or bone fragments, fish hooks, hide chews, toys, balls and dental chew treats (Houlton *et al*., 1985; Leib and Sartor, 2008). Foreign bodies commonly lodge at the thoracic inlet, base of the heart and at the caudal oesophagus i.e., between heart and diaphragm (Pearson, 1966). Successful retrieval of an accidentally ingested bone piece from the caudal thoracic oesophagus in a spitz pup is kept on record.

CASE HISTORY AND OBSERVATION

A four month old female Spitz pup weighing 3 kg was presented to the surgery out patient unit of Veterinary College Hospital, Mannuthy, with a history of accidental ingestion of bone piece last night. The pup was dull and depressed and showed excessive salivation and regurgitation. Clinical parameters were found to be within the normal range. Physical examination of cervical oesophagus did not reveal the presence of any foreign body. Lateral plain thoracic radiograph revealed the presence of a radiopaque mass at the distal end of oesophagus between heart and diaphragm. The mass was confirmed to be a bone piece by oesophagoscopy. An attempt to push the foreign body into the stomach was made, but was in vain. Surgical retrieval of foreign body from the caudal thoracic oesophagus *via* gastrotomy was resorted to.

TREATMENT

The patient was stabilized preoperatively by administration of dextrose normal saline @ 10 ml/kg body weight and Ringer's lactate @ 10 ml/kg body weight intravenously. The dog was premedicated with atropine sulphate @ 0.04 mg/kg body weight followed by xylazine @ 1.5 mg/ kg body weight intramuscularly. The midventral abdominal site was prepared for an aseptic surgery. General anaesthesia was induced with ketamine hydrochloride @ 5 mg/kg body weight, given intramuscularly. Anaesthesia was maintained by intravenous infusion of a combination of xylazine and ketamine, equal proportion by volume and diazepam to effect.

The animal was positioned in dorsal recumbency. A ventral midline abdominal skin incision was made from the xiphoid to the umbilicus. The subcutaneous tissue was separated, *linea alba* was identified and incised. The attachments of falciform ligament were digitally broken down. The stomach was exteriorized and isolated from the remaining abdominal contents with moistened sterile laparotomy sheets. A 6cm long incision was made in a less vascular area of the stomach between the greater and lesser curvatures. A long jawed curved forceps was introduced through the cardia into the oesophagus and the bone piece was extracted. The gastric incision was closed by double inversion sutures, connell's followed by lembert's pattern, using 2-0 polyglactin 910. The wound on the *linea alba* was closed with simple continuous sutures using 1-0 Polyglactin 910 and the skin was apposed by Horizontal mattress sutures using fine nylon. Postoperatively administered ceftriazone injection (Intacef, Intas pharmaceuticals) @ 25 mg/kg body weight intravenously and meloxicam injection (Melonex, Intas pharmaceuticals) @ 0.5 mg/kg body weight intramuscularly. The owner was advised to feed semisolid diet after 24 hours. The antibiotic therapy was continued for four more days. Skin sutures were removed on 7th postoperative day and the animal made an uneventful recovery.

DISCUSSION

Oesophageal obstruction are common in dogs especially in puppies because of their indiscriminate

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eating behavior. The affected dog may show clinical signs like regurgitation, excessive salivation or retching, inappetence and respiratory distress. The duration of clinical signs before presentation ranges from a few hours to several months (Pearson, 1966). In most cases, 99% of the bony foreign bodies can be diagnosed on a thoracic survey radiograph itself. Positive contrast radiography is often required to identify a radiolucent foreign body and can be confirmed by oesophagoscopy (Houlton *et al*.,1985).

An extrathoracic approach to the distal thoracic oesophageal foreign bodies can be made use of, either by pushing the foreign into the stomach and removal *via* gastrotomy or removal from caudal oesophagus *via* gastrotomy (Taylor, 1982). The abundant blood supply and rapid healing of stomach makes dehiscence of gastrotomy incision rare compared to oesophagotomy incision (Rasmussen, 2003). Timely presentation of case is very important as the foreign body can cause pressure necrosis and thereby perforation of oesophagus if delayed, where an oesophagectomy will be required. Postoperative complications with gastric surgery may include vomiting, peritonitis secondary to intraoperative or postoperative leakage, dehiscence of gastrotomy incision and gastric oesophageal reflux. Postoperative complications were not noticed in the present case and the animal made an uneventful recovery.

SUMMARY

A case of caudal thoracic oesophageal foreign body obstruction in a pup and its successful surgical management is reported.

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REFERENCES

Houlton, J.E.F., Herrtage, M.E., Taylor, P.M. and Watkins, S. B. 1985. Thoracic oesophageal foreign bodies in the dog: a review of ninety cases. *J. Small Anim. Pract*. **26** : 521-536

Leib, M. S. and Sartor, L. L. 2008. Oesophageal foeign body obstruction caused by a dental chew treat in 31 dogs (2000- 2006). *J. Am. Vet. Med. Assoc*. **232** : 1021-1025

Pearson, H. 1966. Symposium on conditions of the canine oesophagus: foreign bodies in the oesophagus. *J. Small Anim. Pract.* **7** : 107- 116

Rasmussen, L. 2003. Stomach: In *Textbook of small animal surgery*. Ed. Slatter, D. 3rd edn. W. B. Saunders, Philadelphia, pp: **592**- 640

Spielman, B. L., Shaker, E. H. and Garvey, M. S. 1992. Oesophageal foreign body in dogs: a retrospective study of 23 cases. *J. Am. Anim. Hosp. Assoc.* **28** : 570-574

Taylor, R. A. 1982. Transdiaphragmatic approach to distal oesophageal foreign bodies. *J. Am. Anim. Hosp. Assoc*. **18** : 749