SURGICAL REMOVAL OF ESOPHAGEAL FISH HOOK FOREIGN BODY IN A PUP

Rohit Kumar[1], A.C. Saxena[1], Mudasir A. Shah[2], Arif Basha[2], Naveen Kumar Verma[2], Amarpal[3], P Kinjavdekar[3], AM Pawde[3]

[1]Scientist, [2]Ph.D. Scholar, [3]Principal Scientist, Division of Surgery, ICAR-IVRI, Izatnagar, Bareilly, 243122, U.P.

[Received: 27.5.2019; Accepted: 18.11.2019]

{DOI 10.29005/IJCP.2019.11.2.189-191}

A four month old, Labrador male pup, weighing six kg was presented to the TVCC & RVP, IVRI with a history of fish hook ingestion accidently in a confusion of bait. The pup ingested two fish hooks and one hook was stucked at the cheek which was removed by the owner however, second hook was ingested completely by the pup. Radiography revealed the presence of hook at gastric inlet and location was confirmed with endoscopy. Endoscopic removal could not be performed as hook was tightly anchored in the esophageal mucosa and hook was removed surgically with gastrotomy an animal showed uncomplicated recovery.

Keywords: Gastrotomy, Fish hook, Pup.

Removal of esophageal and gastric foreign bodies in dogs and cats has been reported in numerous publications. Bones and plastic objects as gastric foreign bodies were the most common types of foreign bodies in dogs and cats (Luthi and Neiger, 1998; Moore, 2001; Rousseau *et al*., 2007; Gianella *et al*., 2009; Hayes, 2009; Deroy *et al.*, 2015). There are fewer reports describing fishhook foreign bodies (Moore, 2001; Rousseau *et al.*, 2007; Leib & Lee Sartor 2008 , Gianella *et al*. 2009; Juvet *et al.*, 2010 , Pratt *et al.*, 2014 , Deroy *et al.*, 2015). When endoscopic retrieval is unsuccessful, or severe perforations were present or if endoscopic removal carries a high risk of perforation, surgical removal *via* oesophagotomy or gastrotomy was recommended (King, 2001; Leib and Lee Sartor, 2008; Deroy *et al.*, 2015). Although reports of endoscopic or surgical removal of oesophageal and gastric foreign bodies have been published (Moore, 2001; Rousseau *et al.*, 2007, Leib and Lee Sartor, 2008; Gianella *et al.*, 2009; Juvet *et al.*, 2010; Pratt *et al.*, 2014; Deroy *et al.*, 2015), there was little information regarding the retrieval of fishhooks. Only one retrospective study published in 1995 has evaluated the efficiency of endoscopic retrieval of fishhooks from the oesophagus or stomach, and the reported success rate was 66% (Michels *et al.*, 1995). Such oesophageal and gastric sharp foreign bodies may lead to digestive perforation, if left untreated (Pratt *et al*., 2014). The present case report describes successful removal fish hook foreign body through gastrotomy incision in a pup.

Case History and Observations

A four month old, Labrador male pup, weighing six kg was presented to the TVCC & RVP, IVRI with a thread hanging at mouth. History revealed accidental ingestion of two fish hooks in a confusion of bait. One hook was stucked at the cheek which was removed by the owner however, second hook was ingested completely by the pup. Radiography revealed the location of hook at gastric inlet which was confirmed with endoscopy. Sharp end of the hook was facing cranially therefore manual pulling of the thread was not attempted. Physical parameters like temperature, respiration and pulse rate were within the normal range and the case was subjected to surgery for removal of fish hook through gastrotomy incision.

Surgical Treatment

Animal was subjected for endoscopy under general anaesthesia and premedicated with atropine sulphate 0.04 mg/kg, midazolam 0.2 mg/kg and butorphanol 0.2 mg/kg followed by induction and maintenance with thiopental sodium intravenously. It was tried to hold and remove

the fish hook with the help of grasping forceps during endocscopic procedure but attempts were unsuccessful. Therefore animal was prepared aseptically for surgery. The dog was positioned in dorsal recumbency and cranial midline incision extending from the xiphoid process to the umbilicus was made and a linear incision was given on the greater curvature of stomach near the cardia. Fish hook was located and removed from the gastric inlet.

Fig.1 Endoscopic visualization of fish hook with its thread tightly anchored at the dorsal esophageal wall

Fig.2 Radiograph showing fish hook at gastric inlet

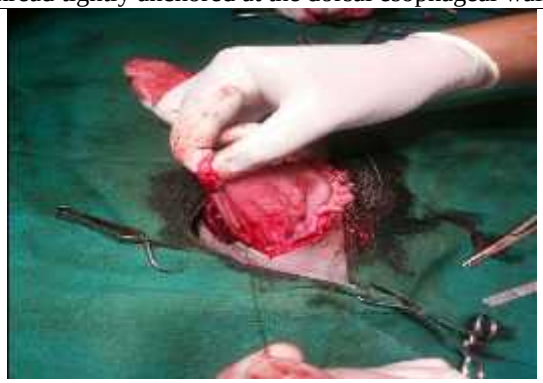

Fig.3 Gastrotomy incision near the esophageal sphinctor for rerieval of fish hook foreign body

Fig.4 Retrieval of fish hook through gastrotomy incision

Gastrotomy incision was closed in two layers. Mucosa and submucosa was closed in simple continuous suture pattern followed by muscularis and serosal layer in double layer of Lembert's suture pattern with 2-0 PGA. Laperotomy incision was closed in a standard manner. Postoperative antibiotic treatment was constituted using Ceftriaxone 20 mg/kg for five days, Meloxicam 0.5 mg/kg for three days. Oral intake of food and water were witholded for five days and total intravenous fluid therapy was given during this period. Suture line was dressed daily with 5% betadine. Skin suture were removed on 12th postoperative day.

Results and Discussion

The animal had good recovery from the surgery. Thus, it was concluded that in such cases where fish hook is tightly and deeply anchored in the submucosal layer of esophagus, surgical removal might be the best option for the retrieval.

References

Deroy, C., Benoit Corcuff, J., Billen, F. and Hamaide, A. (2015). Removal of oesophageal foreign bodies: comparison between oesophagoscopy and oesophagotomy in 39 dogs. *J. Small Anim. Pract.*, **56**: 613-617.

Gianella, P., Pfammatter, N. and Burgener, I. (2009). Oesophageal and gastric endoscopic oreign body removal: complications and follow-up of 102 dogs. *J. Small Anim. Pract.*, **50**: 649-654.

Hayes, G. (2009). Gastrointestinal foreign bodies in dogs and cats: a retrospective

study of 208 cases. *J. Small Anim. Pract.*, **50**: 576-583.

Juvet, F., Pinilla, M., Shiel, R.E. and Mooney, C. (2010). Oesophageal foreign bodies in dogs: factors affecting of endoscopic retrieval. *Ir.Vet. J.*, **63**: 163-168.

King, J.M. (2001). Esophageal foreign body and aortic perforation in a dog. *Vet. Med.*, **96**: 828.

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

Luthi, C. and Neiger, R. (1998). Esophageal foreign bodies in dogs: 51 cases (1992-1997). *Euro. J. Comp. Gastroent.*, **3**: 7-11.

Michels, G., Jones, B. and Huss, B. (1995). Endoscopic and surgical retrieval of fishhooks from the stomach and esophagus in dogs and cats: 75 cases (1977- 1993). *J. Am. Vet. Med. Assoc.*, **207**: 1194-1197.

Moore, A.H. (2001). Removal of oesophageal foreign bodies in dogs: use of the fluoroscopic method and outcome. *J.Small Anim. Pract.*, **42**: 227- 230.

Pratt, C.L., Reineke, E.L. and Drobatz, K.J. (2014). Sewing needle foreign body ingestion in dogs and cats: 65 cases (2000-2012). *J. Am. Vet. Med. Assoc.*, **245**: 302-308.

Rousseau, A., Prittie, J., Broussard, J.D., Fox, P.R. and Hoskinson, J. (2007). Incidence and characterization of esophagitis following esophageal foreign body removal in dogs: 60 cases (1999-2003). *J. Vet. Emerg. Crit. Care.*, **17**: 159-163.