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Clinical Article

SUCCESSFUL NON-SURGICAL REMOVAL OF CLOTH AS AN OESOPHAGEAL FOREIGN BODY FROM A BUFFALO CALF

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SUMMARY

A 15-day old male calf was presented with the history of regurgitation of milk and water since last five days. On clinical examination, the stomach tube was not able to pass beyond the mid cervical area. Contrast radiography revealed a radiolucent shadow obstructing the oesophageal lumen. Under mild sedation using xylazine, the foreign body (cloth) was successfully retrieved using retractable claw retriever stick.

Keywords: Calf, Foreign body, Obstruction, Oesophagus, Retractable claw retriever stick

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Oesophageal obstruction, or choke, is a common occurrence in cattle, and is attributable to their feeding habits (Smith, 2008). Obstructions are often caused by ingestion of foreign objects or feedstuff, administration of medicated boluses, trichobezoars, or esophageal granulomas (Yadav *et al.*, 2008). In young calves, oesophageal disorders may also be due to congenital megaoesophagus or oesophago-tracheal fistula (Ulutas *et al.*, 2006). Oesophageal obstruction is an acute life threatening condition which required emergency treatment (Prakash *et al.*, 2014) in cattle. The present report describes the successful non-invasive retrieval of oesophageal foreign body in a buffalo calf.

A 15 day old calf with the history of regurgitation of milk and water was presented to the VCC, LUVAS, Hisar. The owner suspected about the ingestion of a small piece of cloth by the calf but no foreign body was palpablein the cervical oesophagus. However, the stomach tube was not able to be passed beyond mid cervical region of oesophagus. On contrast (Fig. 1) radiography with barium meal, a radiolucent shadow obstructing the oesophageal lumen was evident. Non-surgical removal of the foreign body was attempted using a 'retractable claw retriever stick'(commonly used for retrieving things from drainage pipes) in lateral recumbency and inj. xylazine @0.02 mg/kg IV sedation.

The position of the obstruction was ascertained and its distance from rima-oris was measured. The same length was marked on retriever from anterior end and a coloured tape applied at that place. The oral cavity was opened using a mouth gag and a "retractable claw retriever stick" lubricated with liquid paraffin was passed into oesophageal lumen. The retriever stick was moved inside upto the mark applied and a blind catch attempt was made. The stick was pulled out leaving the jaw closed. The foreign body/cloth got entangled in the retriever jaw and thus could be retrieved (Figs. 2 & 3). Now, the stomach tube was passed and it passed easily without any hindrance. To reduce infection and inflammation associated with manipulation of oesophageal wall and injury caused by the foreign body, post-operative treatment included inj. RL 1litre, intravenously, inj. cefotaxime 500 mg intramuscular twice a day, Inj. Meloxicam 4 mg intramuscular once a day, and Inj. chlorphenaramine maleate 2 ml intramuscular twice a day for 3 days. The calf showed uneventful recovery along with improvement in body condition.

Endoscopic retrieval is recommended method for oesophageal foreign body, as it can precisely locate and remove them. Being a costly equipment, the endoscope being is limited mostly to the research, teaching and a few big private small animal hospitals. The tool named "retractable claw retriever stick" can be used safely in such cases. It is around 30 inches long and having a claw end and a hand held operating end (Figs. 4 & 5). In daily life, it is used to retrieve any key, chain or any other such things from drain pipes of kitchen/bathroom. This is the perhaps first report related to the use of this instrument in removal of oesophageal obstruction in calves/animals. Animals with complete esophageal obstructions are reported to be presented anxious, may stand with an extended neck, swinging it from side-to-side while attempting to swallow (Smith, 2008). As the complications are common after oesophagostomy due to lack of serosa, segmental blood supply, frequent mobility and poor ability to bear tension; so the conservative treatment is preferred by either retrieving the foreign body through oral cavity route or by pushing it inside the stomach followed by gastrotomy

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Fig. 1. Contrast radiograph of the cervical oesophagus showing dialatation of the caudal cervical oesophagus with the non-passing of barium.

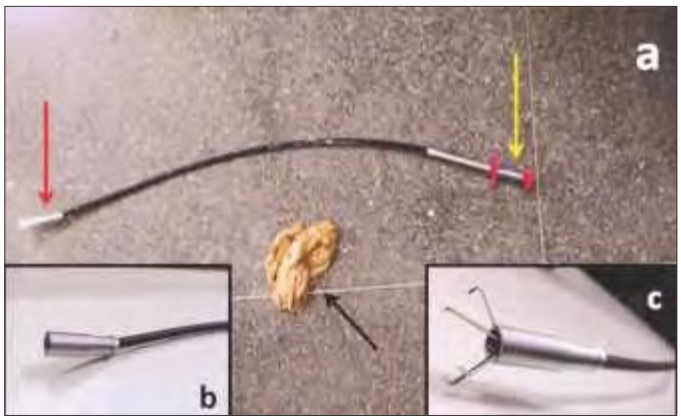

Fig. 3. Photograph of retractable claw retriever stick with claw end (red arrow) and the hand held end (yellow arrow). The retractable claw is seen in closed (b) and open position (c) in the insets.

(Gosai *et al.*, 2020). In ruminants the obstructions commonly occur in cervical region where external palpation may be used to confirm (Niehaus, 2008).

In the present case, the cloth being a soft foreign body was not able to be palpated. Passing of a stomach tube, helped to diagnose the approximate location of the foreign body. Oesophageal endoscopy of the oesophagus may also be used to confirm the diagnosis (Smith, 2008). Double contrast radiography, with barium (sterile sodium iodine contrast if esophageal perforation is suspected) and

Fig. 2. Photograph showing the retrieval of foreign body using retractable claw forceps under sedation.

air, has also been reported to better identify the location and nature of the foreign body (Patel and Brace, 1995). The authors recommend the use of retractable claw retriever stick for the removal of such foreign bodies placed in cervical oesophagus in young bovines under sedation and mouth gag application.

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