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Manual retrieval of a liner foreign body from cervical esophagus in a female buffalo

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Abstract

An 8 years old female buffalo of Murrah breed was brought to the Department of Veterinary Clinical Complex, LUVAS, Hisar with the history of animal having eaten a foreign body. Animal was dull and off feed since 3 days. Radiographic examination of cervical oesophagus revealed presence of a radiopaque linear foreign body at the level of C₂/C₃ vertebrae and a small part penetrating into the lumen of larynx. After applying mouth gag under mild sedation, attempts were made to introduce the hand into the esophagus and locate the foreign body. Then on the 3rd attempt a metallic wire of approximately 11.5 cm was successfully retrieved. Animal made an uneventful recovery within 5 days.

Keywords: Buffalo, linear, foreign body, manual retrieval

Introduction

Bovines have indiscriminate feeding habits due to which ingestion and lodgment of foreign bodies are common (Saharan *et al.*, 2023) [8]. Feeding habits and nutritional deficiencies are major predisposing factor for the development of metabolic disease and foreign body syndrome (Bikhane, 2013) [1]. Foreign body ingested accidentally in dairy animals is associated with morbidity leading to production loss as well as mortality in some cases and hence, causes a great economic loss (Radostits *et al.*, 2017) [6]. These foreign bodies in cattle and buffalo are categorized into two main groups: first group of metallic foreign bodies and second group of non-metallic origin (Misk *et al.*, 2001) [5]. Radiography is a helpful technique for the diagnosis of metallic foreign bodies (Hunt *et al.*, 2004) [3].

The present study deals with the manual retrieval of a linear metallic foreign body lodged in the cervical part of the oesophagus.

History and clinical signs

An 8 years old female Murrah buffalo was brought to the Department of Veterinary Clinical Complex, LUVAS, Hisar with the history of animal having eaten a foreign body. Owner was having doubt for eating of wire. Animal was off-feed since 3 days and ropy salivation was also noted. For confirmatory diagnosis, cervical oesophagus (lateral view) X-ray was performed and approximately 8.8 cm long radio-opaque wire was seen in the cervical oesophagus at level of C₂/C₃ vertebra (Fig.1) with its one end penetrating into the larynx. Based on the radiographic finding the present case was diagnosed as that of oesophageal linear foreign body.

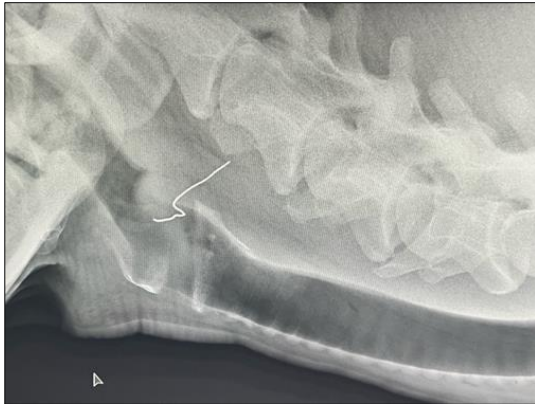


Fig 1: Linear foreign body in cranial oesophagus at the level of C₂/C₃ vertebra



Fig 4: Approximate length of 11.5cm

Treatment and discussion

Animal was sedated with xylazine hydrochloride given intravenously at 0.1mg/kg body weight. Mouth gag was applied with upper and lower jaw retraction (Fig.2). Hand was advanced into the lumen of the oesophagus to locate the foreign body. In third attempt a metallic wire of approximately 11.5 cm was retrieved successfully manipulating the end stuck in the laryngeal cavity (Fig.2 and 3). Oral cavity was washed with diluted KMNO₄ and owner was advised to do the same for 3 days. Administration of Strep to-penicillin 5g, meloxicam 10ml and chlorpheniramine maleate 10 ml intramuscularly once daily for 3 days was advised in post-operative period. Animal resumed with normal feeding and drinking within three days.



Fig 2: Mouth gag applied



Fig 3: Metallic wire retrieved

Buffaloes have fierce nature which escalates the obstruction and therefore premedication with xylazine aids in calming the animal as well as relaxation of the oesophageal muscles (Shokry and Elkasapy, 2021) [9]. Hence in the present study animal was premedicated with xylazine hydrochloride. Similar to the present case successful manual retrieval from the pharyngeal region of fish hook was done by Satbir *et al.* (2014) [7] in a female buffalo and a sewing needle in a female Jersey cow (Bishnoi *et al.*, 2016) [2]. Jadhav *et al.* (2021) [4] reported a similar case of linear foreign body but in the pharyngeal region visible through the skin and it was retrieved successfully by surgical intervention. Although using radiographs, the metallic foreign body lodged in the upper gastrointestinal tract can be diagnosed successfully (Saharan *et al.*, 2023) [8] but their retrieval is challenging in many cases.

In the present study a metallic wire was successfully retrieved from the cervical oesophagus without any complication. No surgical procedure was required in the present study as simple manual retrieval of the foreign body through oesophageal lumen was successful on third attempt. Animal resumed with normal feeding within three days.

Conclusion

The case study highlights the significant risk posed by foreign body ingestion in bovines, particularly metallic objects, which can lead to serious health complications and economic losses in the livestock industry. Prompt diagnosis using radiography plays a crucial role in identifying such foreign bodies, enabling timely intervention to mitigate morbidity and mortality risks associated with these incidents. The successful manual retrieval of the 8.8 cm radio-opaque wire lodged in the cervical oesophagus of the Murrah buffalo underscores the importance of veterinary intervention in managing such cases effectively. This emphasizes the need for preventive measures and vigilant management practices to minimize the occurrence of foreign body syndrome in cattle and buffalo.

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