

THORACIC ESOPHAGEAL OBSTRUCTION AND ITS RETRIEVAL BY RUMENOTOMY IN A GRADED MURRAH BUFFALO CALF

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ABSTRACT

The report describes the diagnosis, treatment and outcome of the thoracic esophageal obstruction cranial to the cardia in and one month old, female graded Murrah buffalo calf.

Keywords: *Bubalus bubalis*, buffaloes, calf, esophageal obstruction, rumenotomy

INTRODUCTION

Obstruction of esophagus is a common occurrence in ruminants and the incidence of obstruction at cervical region is high compared with thoracic region (Tyagi and Jit Singh, 2004). The present study reports a case of thoracic esophageal obstruction in a Graded Murrah buffalo calf and its retrieval by rumenotomy.

CASE HISTORY AND OBSERVATIONS

A one month old, male graded Murrah buffalo calf was presented to the Veterinary Clinical Complex with a complaint of regurgitation of milk through mouth and nostrils since last

night. On history found that the calf was recently introduced to dry fodder. Clinical examination revealed, partially distended abdomen with all the vital parameters in normal range. Examination of oral cavity and palpation of cervical esophagus were done to rule out the presence of cervical esophageal foreign body. Stomach tube was passed to know the level of obstruction, which after reaching the thoracic area got struck and failed to reach the rumen.

Lateral thoracic area survey radiograph was done which revealed a mass with increased radiodensity in the thoracic esophagus, caudal to the heart and cranial to the diaphragm (Figure 1) leading to a suspicion for a mechanical obstruction in esophagus. Hence, barium meal positive contrast radiography was done, 5 to 10 ml /kg bwt. which revealed filling defect at the same site (Figure 2) and the condition was diagnosed as thoracic esophageal obstruction. As the obstruction was close to the diaphragm, an abdominal approach was planned and the animal was prepared for rumenotomy.

TREATMENT AND DISCUSSION

Animal was prepared for aseptic surgery. Rumenotomy was performed under local injectable

analgesia with inverted 'L' block technique using 2% lignocaine hydrochloride. Stay sutures in rumen were applied prior to the rumenotomy and after entering the ruminal sac, manual retrieval of obstruction which was a lump of dry fodder (Figure 3) that got struck into a mass partially obstructing the lumen of esophagus.

Esophageal patency was checked by passage of stomach tube, later rumenotomy and laporotomy incisions were closed as per the standard procedure. The calf was administered Inj. Amoxicillin 7 mg/kg bwt. IM for 7 days and Inj. Meloxicam 0.5 mg/kg bwt. IM for 3 days postoperatively. Calf started suckling of milk on the same day without signs of regurgitation. The skin sutures removed on 12th post operative day and the calf made an uneventful recovery.

Esophageal obstruction is common in cattle, buffaloes, camels and small ruminats mainly because of their feeding habits. Obstruction often observed due to ingestion foreign bodies

like large sized vegetables, fruits, palm kernel, phytobezoars, and intraluminal masses (Tyagi and Jit Singh, 2004). Common methods to diagnose the obstruction were examination of oral cavity, palpation of cervical esophagus and passage of stomach tube to determine the level of obstruction in addition to the plain and contrast radiography. In the present case, initial attempts were made to push the obstruction into rumen by stomach tube which was not successful. As there were chances of damage to the esophageal mucosa (Radostitis *et al.*, 2007), further attempts were not done. Hence, in the present case rumenotomy was preferred over other methods based on the location of foreign body cranial to the diaphragm. A lump of dry fodder was the cause of obstruction which could be due to too early offering of dry fodder (Tyagi and Jit Singh, 2004).

In general, the common treatment options for esophageal obstruction include gentle dislodgement of obstruction and pushing into



Figure 1. Lateral thoracic survey radiograph showing a mass with increased radiodensity (Blue arrow) caudal to the heart and cranial to the diaphragm.



Figure 2. Lateral thoracic positive contrast radiograph with barium meal showing a filling defect (Blue arrow) caudal to the heart and cranial to the diaphragm indicating the thoracic esophageal obstruction.



Figure 3. Photograph showing a lump of dry fodder retrieved from thoracic esophagus by rumenotomy.

rumen, esophagotomy, rumenotomy and endoscopic retrieval depending on the level of obstruction (Radostitis *et al.*, 2007). Esophageal obstruction due to polythene bags and accidental entrapment of feeding tubes and its endoscopic retrieval were reported (Gomez *et al.*, 2014; Gowri *et al.*, 2016). But in present case, contrast radiography and rumenotomy were proved successful to determine the location of the obstruction and its successful removal.

REFERENCES

- Gowri, B., S. Kavitha, D. Chandrasekaran, P.A. Enbavelan and P.S. Thirunavukkarasu. 2016. Endoscopic removal of oesophageal foreign body (polythene bag) in a calf - A case report. *Indian Vet. J.*, **93**(6): 60-61. Available on: <https://krishikosh.egranth.ac.in/displaybitstream?handle=1/93053>
- Gomez, D.E., N.C. Cribb, L.G. Arroyo, A. Desrochers, G. Fecteau and S. Nichols. 2014. Case report: Endoscopic removal of esophageal and ruminal foreign bodies in 5 Holstein calves. *Canadian Vet. J.*, **55**: 965-969.
- Radostits, O.M., C.C. Gay, K. Hinchcliff and P.D. Constable. 2007. Veterinary medicine. *A Textbook of the Diseases of Cattle, Horses, Sheep, Pigs and Goats*, 10th ed. Elsevier, Philadelphia, USA.
- Tyagi, R.P.S. and J. Singh. 2004. Ruminant Surgery. *A Text Book of the Surgical Diseases of Cattle, Buffaloes, Camels, Sheep and Goats*. CBS Publishers and Distributors, New Delhi, India.