

OESOPHAGEAL OBSTRUCTION IN A PREGNANT BUFFALO

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ABSTRACT

An advanced pregnant buffalo presented with a history of regurgitation of feed and water within two minutes of ingestion since 12 h. Passage of probang (stomach tube) and radiography revealed intra-luminal esophageal obstruction at the mid cervical region. Mid cervical oesophagotomy was performed in standing position under local infiltrative analgesia. The oesophageal incision was sutured using two layer pattern (mucosa-interrupted suture pattern using surgical silk No. 2 suture followed by lock-stitch pattern for sub-mucosa, muscularis and adventitia all together as a single layer using catgut No. 1 suture). The animal had an uneventful recovery. The retrieved obstruction mass was found to be rexin material.

Keywords: buffaloes, *Bubalus bubalis*, choke, mid cervical oesophagotomy, rexin, pregnant buffalo, standing oesophagotomy

INTRODUCTION

Oesophageal obstruction is defined as partial or complete obstruction of oesophageal lumen resulting in the inability to swallow

effectively. A foreign body can cause a complete or partial obstruction with the obstruction occurring most often at site of limited oesophageal distension. Shivaprakash *et al.* (1998) reported that most of the oesophageal obstructions in bovines are present in the cervical region. Ingested feed is the most common cause of obstruction, particularly large objects such as apples, corncobs, potatoes, mango seed, gunny bag, cloth, phytobezoars, polythene and rubber sheets (Shivaprakash *et al.*, 1998; Radostitis *et al.*, 2002; Haskell, 2008; Tyagi and Singh, 2010). Bovines can ingest foreign bodies due to their indiscriminate feeding habits, pica or due to lack of pasture feeding (Aher *et al.*, 1992).

HISTORY AND OBSERVATIONS

A seven years old, advanced pregnant buffalo was presented with a complaint of regurgitation of feed and water through the mouth within 2 to 3 minutes after ingestion (Figure 1). Palpation at the ventral mid cervical region revealed a hard object indicating the case to be tentatively as choke. The physiological parameters were within normal limit. There was no evidence of salivation or bloat since 6 to 8 h. Attempts to pass a probang (stomach tube) could not be accomplished beyond

the mid cervical oesophageal region. Radiography of the lateral cervical region performed to determine the etiology and the site of oesophageal obstruction revealed an obstructing intra-luminal mass in the mid cervical region (Figure 2).

The ventro-lateral cervical region was surgically prepared. As the animal was in advance pregnancy stage, it was restrained in standing position. The animal was pre-operatively administered inj. Strepto-penicillin 5 g i/m total dose and inj. Tolfenamic acid 2 mg/ kg b/w i/m. Local analgesia was achieved using linear infiltration of 2% Lignocaine HCl at the site of obstruction. A linear incision of about 15 cm was made over the swollen cervical region. The Sternocephalicus and Sternohyoidous muscles were separated to locate the palpable obstructive mass in the oesophagus. Attempts to exteriorize and temporarily ligate the oesophagus proximally and distally were not fruitful. Hence the dorso-lateral part of the oesophagus proximal to the obstructing mass was exposed and incised. The obstructing foreign body was carefully retrieved with the help of Allis tissue forceps (Figure 3) and the site was adequately lavaged with Normal Saline solution. The oesophagus was closed using two layer pattern. The Mucosa was sutured by pre-placed interrupted suture using silk No. 2. The Submucosa, the Muscularis and the Adventitia (all together) were sutured with Chromic catgut No. 2 using Lockstitch suture pattern. About 10 ml of Normal Saline solution was injected into the oesophageal lumen around the site of suturing using a fine bore needle to check for leakage points if any. The site was adequately lavaged with Normal Saline solution and the muscles were sutured using chromic catgut No. 2 with simple interrupted pattern. The skin was sutured with Nylon using simple interrupted pattern. Exploration of foreign

material revealed that the hard convoluted black mass was a rexin material (Figure 4).

The animal delivered a healthy male calf on the next day of surgery. Postoperatively the animal was kept off feed and water for 3 days. Adequate fluid therapy using (inj. Ringer's lactate and inj. Dextrose normal saline combination) were administered to correct dehydration, electrolyte and acid-base imbalance for 5 post operative days. Inj. Strepto-penicillin, inj. Tolfenamic acid and multi vitamin injections were administered intramuscularly as per the standard recommended doses for 5 consecutive days. The animal started to masticate on the second post operative day. The animal was offered drinking water from 3rd day onwards and was gradually shifted to soft liquid diet followed by chopped green fodder. The incisional wound was dressed until healing and the sutures were removed on the 18th post-operative day (Figure 5). The animal recovered without any complications and regained normal feeding.

RESULT AND DISCUSSION

Conservative treatment of oesophageal obstruction should be aimed to dislodge the obstruction by external or internal manipulations and reduce the oesophageal spasms (Haskell, 2008). Tyagi and Singh (2010) suggested to pass a stomach tube (probang) and to gently push the obstructing material into the rumen only if the obstructing mass was a round object and advised to take care not to injure the oesophagus. Passage of probang and lateral cervical radiography provided confirmatory diagnosis at the site of obstruction and tentative nature of obstructing material. A foreign body can cause a complete or partial obstruction with the obstruction occurring most often at site



Figure 1. Regurgitated feed and water through the mouth and nostrils.

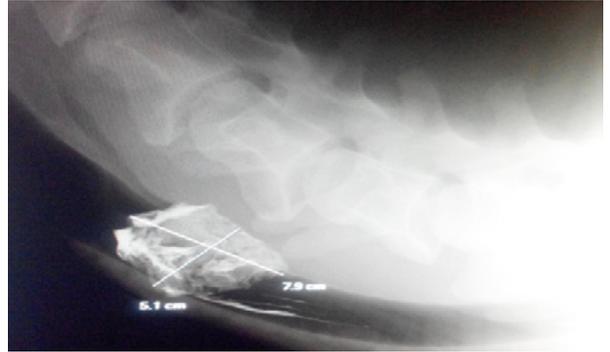


Figure 2. Radiograph of intraluminal foreign body at mid cervical region.



Figure 3. Obstructing foreign body retrieved with the help of Allis tissue forceps.



Figure 4. Rexin material retrieved by Oesophagotomy.



Figure 5. The post operative healing of the incisional wound.

of limited oesophageal distension. Thrall (2007); Tyagi and Singh (2010) suggested that survey and contrast radiography may be satisfactory for identification of radio opaque foreign bodies. In the present case, mid-cervical oesophagotomy to retrieve the foreign body was performed in standing position since the animal was in advanced pregnancy. Though standing restraint was stressful to the operating surgeon and attempt to exteriorize the oesophagus was found to be stressful to the animal, it was effective in decreasing the probability of ruminal bloat and complications associated with restraining under lateral recumbency. In the present case no complications were noticed and the animal recovered uneventfully. In the present case, the post operative survey of the nature and consistency of the obstructing material suggested that the oesophageal obstruction might have occurred due to the regurgitation of the rexin material from the rumen. Timely surgical intervention proved to be a fruitful method in saving the life of the animal.

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