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Case Study

Oesophagotomy for Management of Foreign Body Obstruction in a Non-Descript Cow

Sabyasachi Bhattacharya[1], Shongsir Warson Monsang[2*], V. Lalzawmliana[1], M. P. Baishya[1] and Justin B. William[3]

[1]Assistant Professor, [2]Associate Professor, [3]Professor

Department of Surgery & Radiology, College of Veterinary Sciences & A. H., R. K. Nagar, Tripura (W), India

*Corresponding Author E-mail: warsonmonsang@gmail.com

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ABSTRACT

A non-descript free ranging milch cow reported with the history of profuse salivation, inability to swallow, respiratory distress, abdominal distension was diagnosed clinically as cervical oesophageal obstruction. Surgery was aseptically done under proper sedation and foreign body was removed without any complications until 6 months of postoperative follow-up.

Key words: *Oesophagotomy, Sedation, Xylazine, Cow.*

INTRODUCTION

Oesophageal obstruction or choke which is considered as one of the most important disorder or disease of cattle and horses may be either intraluminal or extra luminal based on the type of obstruction[3]. In cattle, it commonly occurs at the pharynx, the cranial aspect of the cervical oesophagus, the thoracic inlet, or the base of the heart[7] and obstruction of the oesophagus prohibits the process of eructation which may lead to development of severe free gas bloat. Long standing cases of formation of bloat can be life threatening if not treated in time[9], due to increase in the intra-abdominal pressure which may result in respiratory distress of the animal.

Many authors retrieved foreign objects like large feedstuff, vegetables, phytobezoars[15], pieces of leather or rubber[12], coconut[5], palm kernels[2], medicated boluses, and trichobezoars[1], in large animals. The present paper reports cervical oesophageal obstruction caused by fresh potato and its surgical management in a non-descript milch cow.

CASE HISTORY AND OBSERVATION

A non-descript free ranging cow aged about 5 years was presented with the history of copious salivation, respiratory distress, dysphagia along with slight abdominal distention for the past three days. The case was handled already at the local treatment centre with some medicinal therapy with no marked improvement. On clinical examination, there was copious salivation (Fig.1) and the respiratory rate, heart rate and rectal temperature were slightly elevated.

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Rumination was absent and a high pitched ping sound was recorded on auscultation along with moderate level of dehydration. On palpation of the neck along the jugular furrow, a hard mass approximately the size of a small tennis ball was felt at the mid cervical region. Surgical intervention was decided since the attempt to dislodge the foreign body with gentle massage and probang has failed.

TREATMENT AND DISCUSSIONS

A day before the surgery, the animal was fully rehydrated with dextrose and normal saline solutions to maintain the normal balance of fluid and advised for removal of any feed and water within 8 hours of surgery. Under mild sedation with xylazine (@ 0.1mg/Kg BW, IM), the cow was restrained in right lateral recumbent position and the surgical site was prepared aseptically under standard protocol. 2% lignocaine HCl was infiltrated just cranial to the site of obstruction to produce adequate local analgesia. A scalpel skin incision was made over the swelling on the left side of the neck along the dorsal aspect of the jugular furrow. The fascia and the attached muscles were bluntly separated to identify and expose the oesophagus between the sterno-cephalicus muscle and trachea. Thereafter, a 4-6 longitudinal incision was given on the oesophagus just cranial to the site of obstruction to remove the obstructed mass carefully by gentle squeezing with thumb and index fingers [Fig. 2(a) & (b)]. The mucosal layer suffered from mild pressure necrosis which was removed and freshened. Subsequently, the mucosal layer was sutured in simple continuous pattern using chromic catgut no 2-0 and the submucosal and muscularis layers were sutured together separately in similar pattern (Fig.3). The skin was sutured in a simple interrupted pattern using a non-absorbable suture (Fig.4). Postoperatively, systemic antibiotic and anti-inflammatory drugs were administered strictly for five days along with fluid therapy. Subsequently, it was advised to start feeding with soft diet (gruel rice food) for about 10 days and changed the diet slowly to roughage and green grass. The skin suture was removed on the 14th day of post surgery although there was a slight unhealed tissue at the periphery of the wound (Fig.5). The animal made an uneventful recovery and with no complications during two months of observation.

In clinical practice, foreign body oesophageal obstruction in bovines requires immediate intervention, as blockade of the oesophagus may inhibit eructation process and cause severe bloat and respiratory problems. In cattle, about 80% of oesophageal obstruction occurs in the cervical region was reported due to their peculiar feeding habits as compared to other animals[4,14]. Oesophageal obstruction in cattle can be diagnosed based on clinical signs, radiography or by passing a probang and skilled palpation, or passing flexible endoscope[8]. Prompt surgical interventions and corrective manipulations in due time are important contributing factors for successful outcomes[6]. Oesophageal obstruction due to mango[16], tarpaulin cloth[13], tricho-phytobezoar[1], has been corrected surgically without any complication. In the present case, we have successfully retrieved a fresh potato as the causative agent for obstruction. The prognosis is considered good if the oesophageal obstructions are treated within 24 to 36 hr from the onset of clinical signs; and worsens if they are not identified within 36 to 48 hr due to secondary ruminal tympany, inflammation and necrosis of the oesophageal mucosa[10]. In our present case, mild ruminal tympany and superficial necrosis of the mucosa was observed which was successfully treated. The risk of post-operative complications associated with an oesophagotomy such as incisional dehiscence and fistula formation was reported[11], but in present case, no such complications were seen throughout the observation period.

Fig. 1

Fig. 2(a)

Fig. 2(b)

Fig. 1: Copious frothy salivation

Fig. 2 (a): Exposure of the foreign body (potato) in the mid cervical oesophagus.
Fig. 2 (b): Retrieved foreign body (potato) after oesophagotomy.

Fig. 3

Fig. 4

Fig. 5

Fig. 3: Closure of the submucosa and muscularis layer after oesophagotomy with non-absorbable suture material (vicryl-1).
Fig. 4: External skin closure in horizontal mattress pattern using black braided silk.
Fig. 5: Suture removal after 14th day post surgery with maximum healing.

CONCLUSION

The present report illustrates the successful surgical management of cervical oesophageal obstruction by a fresh potato under sedation and local analgesia.

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