

## A SURGICAL APPROACH FOR OESOPHAGEAL CHOKE IN A CROSSBRED COW

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**Abstract:** A Six year old crossbred cow was presented with a history of excessive salivation, restlessness, inability to swallow feed or water and regurgitation of the same through nostrils, severe bloat and palpable swelling at the left lateral cervical part of the oesophagus. It was diagnosed as a cervical oesophageal obstruction (choke) by passing stomach tube. Oesophagotomy was performed and foreign body (unripened Guava) was successfully removed.

**Keywords:** Oesophagotomy, choke, guava, foreign body, oesophageal obstruction, cow.

### Introduction

Choke (Esophageal obstruction) is been encountered frequently in large ruminants caused by large sized food stuffs, foreign objects, trichobezoars or esophageal granulomas and is an emergency surgical condition causing severe tympany which may be life threatening if not treated timely (Radostits *et al.*, 2000). The common sites of obstruction in bovines include pharynx, cervical esophagus, thoracic inlet, base of heart and cardia (Thyagi and Singh 1993). The reported causes of oesophageal obstruction in buffaloes include rexin (Shivaprakash *et al.*,1998), leather (Salunke *et al.*, 2003), coconut (Madhava Rao *et al.*,2009), cloth (Kamble *et al.*, 2010), palm kernel (Hari Krishna *et al.*,2011) and unripened mango (Mandagiri *et al.*, 2017). In cattle, acute and complete oesophageal obstruction is an emergency because it prohibits the eructation of ruminal gases resulting in acute bloat. Objects lodged in the cervical oesophagus may be located via palpation. Endoscopic evaluation and the inability to pass a stomach or nasogastric tube in horses or cattle can also confirm the diagnosis. The primary indication for esophageal surgery in large animals is to relieve esophageal obstructions (choke) which have not responded to conservative treatment (Meagher and Mayhew, 1978).

### **History and clinical signs**

A six year old crossbred cow at farmer's premises was reported with history of sudden onset of ptyalism, stoppage of rumination, intermittent regurgitation and distended left flank. A high pitched ping was heard on auscultation and percussion of left paralumbar fossa because of free gas bloat. On palpation a rigid hard mass (Fig.1) was observed on left ventro-lateral aspect of mid cervical region. Inability to pass a probang was confirmative of intraluminal complete obstruction of cervical esophagus. Attempts of local veterinarian were failed to relieve choke by trocarization *via* mouth or pushing into rumen using probang under Xylazine sedation were unsuccessful. Based on history and severe respiratory distress of animal, it was decided to perform esophagotomy.

### **Treatment and Discussion**

Trocar and canula was applied on left paralumbar fossa after preparing aseptic site to relieve bloat till completion of operation. Animal was restrained in right lateral recumbency and surgical site was prepared aseptically under Xylaxin sedation. 2% lignocaine hydrochloride was infiltrated around the swelling to achieve local analgesia. A longitudinal incision was made along the superior border of the jugular furrow, close to the level of obstruction between sternocephalicus muscle and trachea. Care was taken not to incise vagus nerve, without puncturing jugular vein and artery. Oesophagus was exposed and a longitudinal incision was made directly over the obstructed area and unripped guava was removed (Fig.2). The mucosal layer was sutured with simple interrupted sutures having intra luminal knots using chromic catgut No. 2/0. The muscles and skin were closed in routine manner. Post operatively, feed was withheld for a day and animal was maintained on soft gruel diet for two days there onwards chaffed soft grass was given. Normal Saline and Ringers lactate each @ 15ml/kg body weight intravenously. Inj. Streptopenicillin 5gm and Inj Ketoprofen @ 2mg/kg were administered intramuscularly for 3 days. Sutures were removed on the 12<sup>th</sup> post operative day. Animal was able to feed normally without any post operative complications.

Bovines are frequently affected by esophageal obstruction than other animals and this is attributable to their greedy nature and peculiar indiscriminate feeding habits (Smith, 2008). Wilmot et al., (1989) reported that administration of a regional local anesthetic works by diminishing oesophageal muscle spasm and thus facilitates external oesophageal massage and removal of the foreign body. Cervical choke caused by beetroot were relieved manually by using mouthgag without any complication (Patil *et al.*, 2014). Although esophagotomy is well established technique, Ruben (1997) reported the risk of post operative complications

associated with esophagotomy incisional dehiscence and fistula formation must be considered if pursuing this course of treatment but present case was recovered eventually and no such complications were seen after nine months follow-up.

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Fig.1: obstructive site of Guava in oesophagus



Fig.2: obstructive unripped Guava