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Caudal Thoracic Esophageal Obstruction in a HF Cross Bred Cow : A Case Report.

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ABSTRACT

Thoracic esophageal obstruction is a rare condition in cattle and buffalo. A seven year old HF cross bred cow was presented to the department of Surgery and Radiology, Veterinary College, Shimoga with sudden development of bloat, anorexia and salivation. It was tentatively diagnosed as caudal thoracic esophageal obstruction by passing the probang and based on the owner history. The cow was subjected to emergency rumenotomy. Simultaneously, probang was passed and finally a large maize cob with intact seeds was removed from the cardia of the esophagus.

Key words: Maize cob, rumenotomy, esophageal obstruction.

Intra-luminal obstruction of esophagus was commonly referred as choke and it occurred in buffaloes due to attempts to swallow of a whole fruit like turnips, large lemons, apples, phytobezoars (Tyagi, 1993), and pieces of leather and rubber. (Salunke *et al.*, 2003), ingestion of cloth or rexin material in buffaloes (Sivaprakash *et al.*, 1998 and Sivaprakash, 2003), mango seeds, potatoes, placenta, gunny bags and even stones (Ojha and Mohanty, 1970; Verma, 1974; Nigam *et al.*, 1978; Frank, 1981; Umakanthan, 1995 and Dilipkumar *et al.*, 1995), tarpaulin cloth (Ravikumar *et al.*, 2003), and coconut shell (Madhava Rao *et al.*, 2009). Esophageal obstruction at the cardia part of the esophagus was a rare condition in ruminants (Tyagi, 1993). Esophageal obstruction was a common esophageal disorder in cattle due to incomplete mastication and rapid ingestion (Ravi Raidurg, 2009). Most of the ruminants which suffer from this condition were greedy feeders either because they were high producing animals (or) were nutritionally deficient which made them to eat foreign material to assuage their craving appetite (Tyagi, 1993). A successful surgical management of caudal thoracic esophageal obstruction in a HF cross bred cow is reported here.

A 7-year-old HF cross bred cow was presented to the Department of Veterinary Surgery and Radiology, Veterinary College, Shimoga, with a history of anorexia, not taking water, sudden development of bloat, absence of defecation, decreased urination, increased salivation since 12

hours after the animal returned from grazing. Animal was treated by the local veterinary livestock inspector and he had passed a plastic pipe into the oesophagus. Animal had FMD attack one month back. Clinical examination revealed absence of any hard swelling at left ventro-lateral aspect of proximal cervical region of the oesophagus and passing of the probang revealed some obstruction at the cardia of the esophagus. Clinical examination of oral cavity revealed presence of healing lesions of foot and mouth disease. Temperature, pulse rate and heart rate, were within normal range. Based on the owner history and clinical examination, this case was tentatively diagnosed as caudal thoracic esophageal obstruction and it was decided to relieve obstruction by rumenotomy.

Pre-operatively, the animal was given Dextrose normal saline, 2000 ml, Ringers lactate 1500ml intravenously and enrofloxacin (Enrodac, Zydus Animal Health Limited, Ahmedabad) 15ml intramuscularly. The surgical site was prepared aseptically at left flank region of the animal. The animal was restrained in the standing position. To produce local analgesia, 2% lignocaine hydrochloride was infiltrated in the linear fashion along the line of incision and paravertebral nerve block was followed. A longitudinal incision was made in the skin of left flank region. Muscles were separated by the blunt dissection and peritoneum was incised. Rumen was fixed to weingarth rumenotomy set (Fig. 1). Rumen was

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incised and about 70% of the rumenal contents were removed. Cardia of the oesophagus was located and fingers were passed into the oesophagus. Simultaneously the probang was also passed (Fig. 2) and finally a large maize cob with intact seeds was removed (Fig. 3). Rumen was sutured with catgut No.2 (Trugut, Sutures India Pvt. Ltd, Bangalore) using cushings followed by lemberts pattern. Peritoneum and transverse abdominis muscle were sutured with catgut No.2 using simple continuous lockstitch pattern. Obliques muscles were sutured with catgut No.2 using simple continuous pattern and finally skin was sutured with nylon (Trulon, Sutures India Pvt. Ltd, Bangalore) using cross mattress pattern. Povidone Iodine (Cipladine, CIPLA LTD, Mumbai) ointment was applied to the suture line. Post-operatively, the animal was given Meloxicam (Melonex, Intas pharmaceuticals Ltd, Ahmedabad) 15 ml intramuscularly. Enrofloxacin 15ml and Meloxicam 10ml was given for another 7 days. Oral feeding was withheld and animal was maintained with Dextrose normal saline 3 lts and Ringers lactate 3 lts daily for 3 days. From the 4th day animal was introduced to feed and water. The sutures were removed on the 10th post-operative day and animal recovered unevenfully.

Fig. 1: Rumen was fixed to weingarth's rumenotomy set during rumenotomy.



Fig.2: Probang was passed to induce pressure on the obstructive mass.



Fig. 3: Large maize cob with intact seeds.



In the present case obstruction was complete and hence there was development of severe free gas bloat. Vishwanatha *et al* (2012) reported that in cattle, acute and complete esophageal obstruction was an emergency because it prohibited eructation of ruminal gases, and free-gas bloat developed. Usually the obstruction was common in the cervical part of the esophagus but manipulation of the large, irregular obstructive mass with probang may move the mass to the thoracic part. Venugopalan (1997) stated that obstruction was common in the cervical part of the esophagus. Inability of the cow to masticate the feed normally due to healing oral lesions caused by foot and mouth disease might have predisposed the condition and hence the cow had swallowed the

whole maize kernal with intact seeds. Tyagi (1993) quoted that intra-luminal obstruction of esophagus was commonly referred to as choke occurred in buffaloes due to attempts to swallow of a whole fruit like turnips, large lemons, apples, phytobezoars. The caudal thoracic esophageal obstruction could be successfully managed by rumenotomy to introduce hand into the cardia of esophagus to retrieve the foreign body and simultaneously probang might be passed to induce pressure on it. Tyagi and Jit Singh (2008) stated that in rare cases, when foreign body was lodged at the cardia, rumenotomy might be done to introduce the hand into the cardia to retrieve it and pressure by a probang introduced into the esophagus might also help.

Thoracic esophageal obstruction is a rare condition in cattle and buffalo. The obstruction can be successfully relieved by rumenotomy and with simultaneous introduction of probang to induce pressure on the obstructive mass.

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