ENDOSCOPIC EVALUATION OF FEED STEM INDUCED PHARYNGEAL LACERATION IN A JERSEY CROSSBRED COW

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A five years old female Jersey crossbred cow was presented with the history of anorexia and drooling of saliva and also reported that the owner used feed stem to push the deworming boluses inside the oesophagus. Clinical examination revealed extended head and neck, dysphagia, ptyalism and large, extensive and palpable firm swelling at pharyngeal region. The laboratory findings were insignificant. Radiograph of upper cervical region revealed generalized soft tissue swelling. Video endoscopy of pharynx revealed feed stem deeply piercing inside the pharynx. Mouth gag applied and feed stem measuring about 42 cm was removed manually. On pharyngoscopy, hyperemia, edematous swelling, severe cellulitis, deep laceration with uneven surfaces and mild necrosis were observed. The animal was treated with Ringer's lactate, streptopenicillin and flunixin meglumine for five days. The animal recovered uneventfully following treatment.

Key words: Cow, Endoscopy, Management, Pharyngeal laceration

A five years old female crossbred Jersey cow was reported to Veterinary College and Research Institute Hospital, Namakkal with the history of anorexia and drooling

of saliva. The owner has used feed stem to push the deworming boluses inside the oesophagus 3 days back. Clinical examination revealed dehydration,

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extended head and neck, dysphagia, ptyalism, tachycardia and tachypnoea. Large, extensive, palpable firm swelling was visible over the pharyngeal region. The swelling extended from angle of the jaw towards down the neck and upto the thoracic inlet. The haemato-biochemical findings were insignificant [haemoglobin (11.8 g/dL), packed cell volume (36%), red blood cells ($6.9 \times 10^6/\mu\text{L}$), white blood cells ($6.0 \times 10^6/\mu\text{L}$), aspartate amino transferase (82 U/L), total protein (6.1 g/dL) and albumin (2.4 g/dL)]. Radiograph of upper cervical region revealed generalized soft tissue swelling.

Video endoscopy was done by using Olympus™ [GIF V70] flexible video endoscope with a diameter of 4 mm and a usable length of 100 cm with physical restrain in standing animal without sedation. The endoscope was passed through the nasal cavity and the pharynx was examined. On endoscopy, feed stem piercing deeply inside the pharynx was noticed. Mouth gag applied and feed stem measuring about 42 cm was removed manually (Fig. 1). Later, pharyngoscopy was performed to assess the damage and extension of lesions. Hyperemia, edematous swelling, severe cellulitis and deep laceration with uneven surfaces which were about 15 cm x 7 cm, covered

by a grey necrotic membrane and feed material (Fig. 2) were observed. Areas of mild necrosis were seen on the dorsolateral surface of the pharynx to the left of the epiglottis. The endoscope was further advanced into the oesophagus and was found to be free from lesions.

The animal was treated with Ringer's lactate (@ 10 mL/Kg IV), Dicrysticin (streptomycin @ 10mg/Kg and procaine penicillin G @ 10000 IU/Kg) and flunixin meglumine (@ 0.5mg/Kg IV) twice daily for five days. The animal recovered uneventfully following treatment.

In cattle, perforation of the pharynx is most often caused by the incorrect use of a balling gun, stomach tube or speculum. The frequency of such injuries has increased because it has become common practice for untrained people to administer oral boluses and magnets (Dirksen, 2002). Usually magnets are used to prevent hardware diseases in cattle. Pharyngeal trauma and laceration of the pharynx in cattle is sporadic and usually only one or two animals in a herd were involved (Adams and Radostits, 1988). In the present study, there was a history of feed stem usage to push the deworming bolus inside the oesophagus. This faulty procedure by untrained owner has caused pharyngeal trauma in this case. Owners

Endoscopic evaluation of feed stem induced pharyngeal laceration

Fig. 1. Removed feed stem

Fig. 2. Endoscopic view of pharynx showing pharyngeal laceration

should be properly advised not to use sticks or feed stems for pushing the bolus inside. Direct tissue trauma has been quickly complicated by cellulitis or phlegmon of the retropharyngeal tissue. Clinical signs included salivation “sore throat” as evidenced by extended head, fever, foetid breath, soft tissue swelling in the throat, dysphagia or anorexia and localised or diffused pharyngeal pain (Divers and Peek, 2008) which are in concurrence with the reports of the authors. Endoscopy was a helpful ancillary aid when manual examination of oral cavity was inconclusive or when the size of the animal precludes manual examination (Mann *et al.*, 2013; Smith, 2014). Endoscopic evaluation of pharynx and oesophagus has to be carried out in all the cases of cattle with dysphagia, dyspnoea, ptyalism and regional lymph

node enlargement (Shalini *et al.*, 2016). Management of pharyngeal laceration with streptopenicillin, analgesic and supportive therapy with intravenous fluids like Ringer’s lactate in the present case was supported by Adams and Radostits (1988) and Smith (2014). In the present case, endoscopy was highly useful in identifying pharyngeal laceration and it was complementary to radiography in assessing the nature and extension of lesions in colour authenticated way.

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