

ENDOSCOPIC ESOPHAGEAL DESOBSTRUCTION IN A MULE CASE REPORT

DESOBSTRUÇÃO ESOFÁGICA POR VIA ENDOSCÓPICA EM MUAR RELATO DE CASO

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SUMMARY

The esophageal obstruction (choke) in horses is a clinical emergency that needs to be treated as soon as possible because it may lead to several complications like ulcers and perforations. A six-year old mule, weighing 330 kg, was referred with excessive salivation, coughing, nasal and oral discharge containing food and water, extension of neck and head after three days of clinical evolution. An esophagoscopy was performed and it was visualized an ingesta impaction on the thoracic esophagus with severe concomitant ulcer. The impaction was relieved with an endoscopic forceps. Subsequently, therapy with sodic ampicillin was established, 6 mg/kg BID was administered intravenously for seven days, flunixin meglumine 1.1 mg/kg SID also administered intravenously for three days and omeprazol (2 mg/kg) SID orally for twenty four days. A week after the treatment had initiated, another endoscopic exam showed that the esophagus was unimpeded, the esophageal mucosa in the healing process, and there was a moderate reduction of ulcer dimensions.

KEY-WORDS: Equidae. Esophagoscopy. Ulcer.

RESUMO

A obstrução esofágica é uma emergência na clínica médica de equídeos e deve sempre ser tratada como tal, já que a pressão exercida sobre a mucosa pelo material obstrutivo pode causar diversas complicações, como úlceras e perfurações. Um muar, fêmea, seis anos de idade e 330 kg de peso corporal foi atendido com histórico de disfagia, salivação excessiva, refluxo de material espumoso pela via nasal e oral, tosse e extensão do pescoço e cabeça, com evolução clínica de três dias. Foi realizado o exame endoscópico visualizando-se uma massa de capim compactada obstruindo o esôfago torácico. A compactação foi desfeita com auxílio de pinça romba através do canal de trabalho do endoscópio observando-se uma grave úlcera concomitante. Foi estabelecida terapia antimicrobiana com ampicilina sódica na dose de 6 mg/kg BID por via intravenosa durante sete dias, flunixin meglumina na dose de 1,1 mg/kg SID por via intravenosa durante três dias e omeprazole na dose de 2 mg/kg SID por via oral durante vinte e quatro dias. Uma semana após início do tratamento foi realizada uma nova avaliação endoscópica, sendo observados lúmen esofágico desobstruído e mucosa esofágica em processo de cicatrização, com redução moderada das dimensões da úlcera.

PALAVRAS-CHAVE: Equídeos. Esofagoscopia. Úlcera.

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INTRODUCTION

Every esophageal obstruction should be treated as an emergency due to increased pressure on the esophageal mucosa by the obstructing material, which causes extensive tissue damage with consequent formation of scar tissue, stenosis and even esophageal perforation (MURRAY 2000). The esophagus of an adult horse varies from 125 to 200 cm in length and is divided into three anatomical parts (cervical, thoracic and diaphragmatic). Since the cervical portion is about 50% of the esophagus total length, it is also where esophageal lesions and obstructions are commonly found, whereas they are uncommon in the thoracic and diaphragmatic portions (PINTO, 2009). Histologically, the wall of the esophagus is made by the tunica adventitia, tunica muscular, submucosa and mucosa (STICK, 1999).

Insufficient chewing, dental problems, excessive appetite, drowsiness, exhaustion and recovery from anesthesia are predisposing factors that induce esophageal obstruction (FEIGE et al, 2000). Besides these factors, pre-existing injuries such as external esophageal compression caused by esophageal cancer (BOOTH et al, 2008), achalasia, esophageal diverticulum and stenosis can lead to obstruction of the affected area (MURRAY, 2000).

The diagnosis is based on the presence of clinical signs such as drooling, dysphagia, cough, regurgitation of food as well as difficulty or inability to pass the nasogastric tube, x-ray image preferably with contrast, and endoscopic evaluation (THOMASSIAN, 2005). The therapeutic method may be the conservative one, that is, esophageal lavage with lukewarm water and administration of drugs to relax the muscle in such way that allows the obstruction to be cleared out (PINTO, 2009). If conservative treatment is not effective or in case of a more serious or recurrent obstruction, where the patient's life is at risk, the animal should be referred to surgical treatment (BRÖJER, 2005). This is a case report of a total esophageal obstruction of the thoracic portion in a mule that was diagnosed and treated, in this case, by videoendoscopy.

CASE REPORT

In this study, we describe an esophageal obstruction in a mule, six-year old female weighing 330 kg, used to transport construction materials. The animal was fed vegetables from various commercial establishments in the city. During the interview, the owner informed that the animal had been experiencing dysphagia, excessive drooling, reflux of food and water, cough, extension of head and neck and loss of appetite as well.

The physical examination showed apathy, poor body condition score, congested mucous with capillary refill time of four seconds, heart rate 56 bpm, respiratory rate 16 rpm, body temperature 38.2°C, intestinal hypomotility to the auscultation, dried feces and dehydration. It was not possible to pass the nasogastric tube.

A catheter was placed on the left jugular of the mule, through which it received 10 L of Ringer's lactate to restore fluid and electrolyte balance. Subsequently, a video endoscopy² was performed. Chemical restraint was reached with xylazine 10%, dose of 1.0 mg/kg, intravenously (IV). Videoendoscopy examination showed a dark liquid and ingesta impaction obstructing completely the esophageal lumen in the thoracic esophagus portion at a distance of approximately 1.30 m from the nostrils.

After one-hour manipulation using an alligator type forceps that was introduced through the working channel of the videoendoscope (Figure 1), it was possible to clear out the impaction of the esophageal lumen and clearly see the presence of an extensive ulcer on the esophageal mucosa at the site where the ingesta was causing impaction (Figure 2).

After the endoscopy was performed, it was possible to pass the nasogastric tube to provide enteral hydration, the mule received water and electrolytes in order to restore fluid balance. After removal of the nasogastric tube, the animal ingested water and forage again. There were pain signs after swallowing, but without reflux.

Antimicrobial and anti-inflammatory therapies were instituted with sodium ampicillin, 6 mg/kg IV every 12 hours, during seven days; and meglumine flunixin, 1.1 mg/kg IV during three days and omeprazol, 2 mg/kg orally once daily during 24 days, respectively. A control endoscopy was performed after one week of treatment. The esophageal lumen was totally clear, the esophageal mucosa in the healing process, and there was a moderate reduction of the ulcer size. During the treatment period, the animal showed a significant improvement in clinical condition, eating properly with gradual decrease of pain and discomfort, and calm demeanor.

It is remarkable in this case, the presence of an extensive circular ulcer around the ingesta (Figure 2), which after one week into the treatment had started the healing process. According to Feige et al (2000), the prognosis in cases of simple esophageal obstruction is good, especially when it is the first occurrence and there are no associated complications, which was confirmed by the present case.

It should also be emphasized the unusual fact that the patient was a mule. There is no consistent data in the literature that routinely describes cases of esophageal obstruction in mules, the majority are described for horses, probably because mules are fewer in number and also nutritional management is usually different than that adopted for horses. In a retrospective study of 34 cases of esophageal obstruction, Ramos et al. (2001) reported no occurrences in mules, 26 in adult horses, 7 in ponies of different breeds and 1 in a donkey. It is important to note that the videoendoscopy procedure was used to identify the injury, give a definitive diagnosis and assist in clearing

² Catheter model CFVL-S, 10 mm diameter and 1.60 m length. OLYMPUS®.

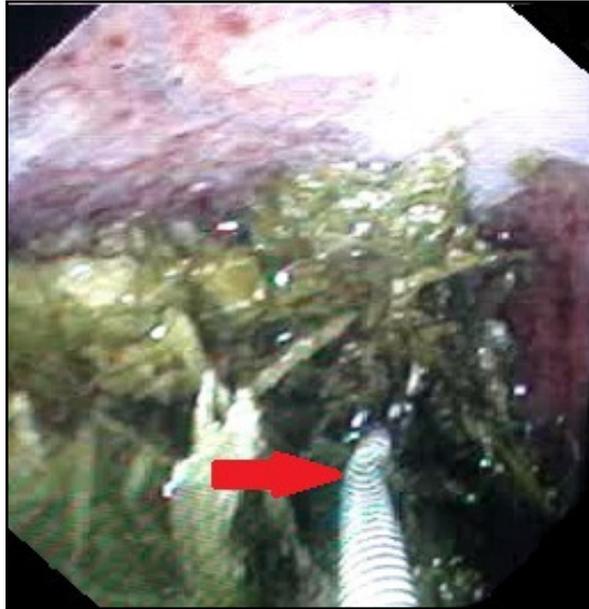


Figure 1 – Video endoscopic image of ingesta impaction in the thoracic esophagus, performing the desobstruction procedure with alligator forceps (red arrow).

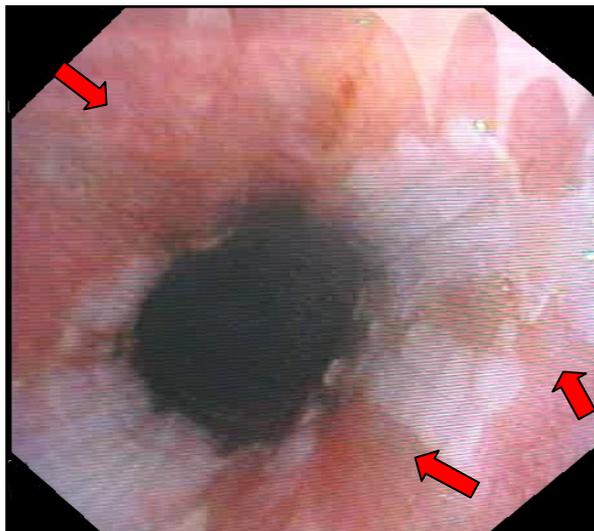


Figure 2 – Video endoscopic image showing the extensive ulcer after desobstruction of the esophageal lumen in the thoracic portion (red arrows).

out the thoracic portion of the esophagus, resulting in a non-invasive therapeutic procedure. It avoided the esophagectomy by thoracotomy, a highly complex procedure that involves risk of death in the trans-operative, in addition to post-operatively surgical complications.

Finally, it can be concluded that the desobstruction procedure using the endoscope was timely and effective, since the location of the obstruction in the thoracic portion could compromise the patient's life. Additionally, the medical therapy established was

effective, prevented secondary complications, allowed progressive recovery of the esophageal mucosa with satisfactory results and improvement of the patient.

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