

Esophageal obstruction due to a trichobezoar in a cow

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A 4-year-old, 6-month pregnant, Angus cow was presented to our clinic with a history of acute onset of severe bloat, respiratory distress, and inability to swallow. The owner had tried unsuccessfully to pass a stomach tube and reported that the tube was being obstructed just beyond the throat. Clinical examination of the cow revealed that the temperature was normal, the heart rate was 96 beats/min, and the respiratory rate was 60 breaths/min. The cow had severe abdominal distention and coughed at regular intervals. Copious amounts of saliva were expelled during these coughing episodes. A high-pitched ping was heard on auscultation and percussion of the left paralumbar fossa, suggesting free-gas bloat. Attempts to pass a stomach tube were unsuccessful.

A wedge gag was placed in the mouth, the tongue was pulled out, and the oropharynx was visually examined using a rigid tubular laryngoscope. No gross visible abnormalities were detected and no foreign bodies were seen in the oropharynx. A flexible endoscope was passed through the rigid scope into the esophagus, and a dark object was visible about 10 cm into the cervical esophagus. It was not easily palpable in the jugular furrow from the outside. However, the object was palpable in the esophagus with the hand in the pharynx, but initial attempts to retrieve it with a hand in the pharynx and external massage from outside were unsuccessful.

The left paralumbar fossa was prepared for aseptic surgery, and a 14 gauge, 3", hypodermic needle was used as a trocar to relieve bloat in the rumen. The cow was then sedated with 40 mg of acetylpromazine (Atravet, Ayerst Laboratories, Montreal, Quebec), IV. Once adequate sedation was achieved, the wedge gag was reinserted in the mouth, the tongue was pulled out to prevent swallowing, and the foreign body was retrieved with a hand in the pharynx and an assistant massaging the foreign body towards the oropharynx from the outside.

Bisection of the foreign body revealed that it was a trichobezoar, densely packed with hair and with a thin outer shell. There were no teeth marks on its outside surface.

The foreign body had a smooth surface, was spherical in shape, and weighed 64 g (Figure 1). Endoscopic



Figure 1. Trichobezoar composed of hair and a thin outer shell.

examination of the pharyngeal region after retrieval of the foreign body revealed a small cut on the dorsolateral aspect of the oropharynx, but no evidence of trauma to the mucosa of the esophagus. Because of dehydration, 12 L of warm water with balanced oral electrolyte (Ionalyte, rogar/STB, Montreal, Quebec) was pumped into the rumen. Parenteral ceftiofur (Excenel, Upjohn, Kalamazoo, Michigan, USA) was prescribed, 1 mg/kg body weight, q24h for 10 d. The day after removal of the foreign body, the cow was drooling saliva, unable to drink, and dehydrated. Balanced polyionic electrolyte solution (20 L) prepared by adding oral electrolyte solution (Ionalyte, rogar/STB) to distilled water was given, IV. The cow was also treated with 500 mg of flunixin meglumine (Banamine, Schering-Plough Animal Health, Kenilworth, New Jersey, USA). The following day, the cow had stopped drooling saliva and started drinking. Endoscopic examination of the esophagus revealed no evidence of trauma or necrosis of the esophageal mucosa; however, there was pooling of fluid at the site of the obstruction. The wound in the pharynx was healing. She was treated with 400 mg of flunixin meglumine (Banamine, Schering-Plough Animal Health), and 12 L of warm water with oral electrolyte (Ionalyte, rogar/STB) and malt extract (Malt Plus, Sanofi santé animale, Victoriaville, Quebec) was pumped into the rumen. The following day, the cow was drinking and had started to eat silage. She was discharged on the day after with instructions to continue the ceftiofur

for another 5 d. The owner was also advised to feed silage rather than hay or straw for the next 10 d. No further complications were encountered and the cow calved without difficulty the following spring.

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Esophageal obstruction due to ingested fruits and vegetables has been reported (1,2). Esophageal obstruction due to a phytobezoar has been reported in a horse (3). Trichobezoars have been reported to cause obstruction in the lower gastrointestinal tract (4). We feel that the trichobezoar was regurgitated rather than ingested, because of the absence of teeth marks on its outer surface. However, the possibility of it having been

ingested cannot be absolutely ruled out. Acetylpromazine was used as the sedative rather than xylazine, because of the potential risks of using xylazine during the last trimester of pregnancy and of aggravating the ruminal tympany (5).

References

1. Radostits OM, Blood DC, Gay CC. *Veterinary Medicine*, 8th ed. London: Baillière Tindall, 1994: 176-183.
2. Guard C. Choke and esophageal disorders. In: Smith BP, ed. *Large Animal Internal Medicine*. St. Louis: Mosby, 1990: 745-746.
3. Macdonald MH, Richardson DW, Morse CC. Esophageal phytobezoar in a horse. *J Am Vet Med Assoc* 1987; 191: 1455-1456.
4. Radostits OM, Blood DC, Gay CC. *Veterinary Medicine*, 8th ed. London: Baillière Tindall, 1994: 193.
5. Trim CM. Special anesthesia considerations in the ruminant. In: Short CE, ed. *Principles and Practice of Veterinary Anesthesia*. Baltimore: Williams & Wilkins, 1987: 285-300.

Answers to Quiz Corner Les réponses du Test Éclair

1. a — The key here is that splashing sounds were heard. Gas and fluid must be present for these sounds to be heard, so traumatic pericarditis is the most likely diagnosis.
a — Les bruits de clapotement sont la clef de ce problème. Ces bruits ne peuvent se produire sans la présence de gaz et de liquide, ce qui rend le diagnostic de péricardite traumatique le plus plausible.
2. d
3. a — Horses do not produce reticulocytes.
a — Les chevaux ne produisent pas de réticulocytes.
4. a — The bovine uterus is very turgid during estrus.
a — L'utérus des bovins est très turgide durant l'œstrus.
5. d — Aminoglycosides are relatively ototoxic in cats.
d — Les aminoglycosides sont relativement ototoxiques chez les chats.
6. a — These are classic signs of dysautonomia.
a — Ces signes sont classiques pour la dysautonomie.
7. c — Iron-deficiency anemia is microcytic hypochromic.
c — L'anémie ferriprive est microcytaire et hypochrome.
8. b
9. c — An improper Ca:P ratio is the major cause of urolithiasis in lambs.
c — Un rapport Ca : P anormal est la principale cause d'urolithiase chez les agneaux.
10. b — There is no vaccine to protect against coccidiosis or proliferative adenomatosis. *Salmonella* and *Serpula* vaccines are not often administered to sows.
b — Il n'y a aucun vaccin contre la coccidiose ou l'adénomatose proliférative. Les vaccins contre *Salmonella* et *Serpula* sont rarement administrés à des truies.

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