

# Journal of Agricultural Sciences Research

Acceptance date: 19/09/2024

## SECONDARY PERITONITIS AFTER RUPTURE OF THE RECTUM IN A MARE

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## INTRODUCTION

The practice of transrectal assessment in horses is an essential complementary tool that plays a significant role in the diagnosis of diseases and in the reproductive assessment of these animals<sup>3</sup>. However, it is crucial to emphasize that performing this procedure should be entrusted to qualified professionals in order to preserve the welfare and general health of the animal, due to the inherent risks associated with it, such as edema, laceration, mucosal irritation and rectal prolapse. In addition, rectal lacerations in horses are classified into four different grades, according to the severity of the injury. Grade I lacerations occur with rupture of the rectal mucosa and submucosa; Grade II lacerations occur when only the musculature is ruptured, in grade III lesions there is rupture of the mucosa, submucosa and musculature, where only the serosa remains intact, and grade IV lacerations correspond to lesions where all layers of the rectum are ruptured<sup>3</sup>. The aim of this case report is to present in detail the treatment, the clinical procedures adopted and the prognosis associated with a complication resulting from complete rupture of the rectum in horses.

## CASE REPORT

On March 8, 2024, a female Mangalarga Marchador, 2.7 years old, with a thrash coat and weighing 460 kg, was admitted to the Veterinary Hospital of the Arnaldo Janssen College, located in Belo Horizonte - MG. The owner's main complaint was the occurrence of hematochezia, sweating and abdominal pain after a transrectal palpation procedure carried out for reproductive purposes.

On initial clinical examination, the animal showed sweating, difficulty walking, a distended abdomen, tachypnea with a respiratory rate (RR) of 55 MPM, cyanotic mucous membranes with a toxemic halo, a capillary refill time (CRT) of 2 seconds, a rectal

temperature (RT) of 39.8 °C, a heart rate (HR) of 86 BPM and an absence of gastrointestinal motility in all quadrants.

As part of the complementary examinations carried out, abdominocentesis with culture and antibiogram of the liquid collected, rectoscopy and transrectal palpation were performed, diagnosing a rupture of the dorsal portion of the rectum, associated with a traumatic fistula approximately 5 cm in diameter. The laceration affected all layers of tissue (mucosa, submucosa, muscle and serosa), causing gastrointestinal contents to leak into the external environment (peritoneum) and triggering systemic toxemia and peritonitis. According to the literature, horses with peritonitis have a mortality rate of between 30 and 67%<sup>1</sup>.

The mare was restrained in the trunk so that the sutures could be made blindly. The suture pattern chosen was a simple separate suture with three sutures using Caprofyl thread and two sutures using Nylon thread. After suturing, the patient underwent supportive treatment with antibiotic therapy for 10 days, using gentamicin (Pangran®) 2ml/100kg, ceftiofur, (Cef-50®) 1ml/50kg, enrofloxacin, (Zelotril10%®) 1ml/40kg, metronidazole (Metronidazole®) 15 mg/kg, gastric secretion inhibitors (Omeprazole®) 1mg/kg, non-steroidal and steroidal anti-inflammatory drugs for 5 days flunixin meglumine, (Flumax®) 1.1 mg/kg, dimethyl sulfoxide (DMSO®) 100ml/animal, dexamethasone (Dexacort®) 0.05 mg/kg, as well as fluid therapy with ringer's lactate (Ringer with Lactate®) for hydroelectrolyte replacement and an oral supplement (Hepvet) 20g/day.

In addition to the drug treatment, the peritoneal cavity was washed with ozonized serum, gentamicin (Pangran®) 2ml/100kg, heparin sodium 80UI/kg, dimethyl sulfoxide (DMSO®) 100ml/animal, once a day for 5 days, as well as intra-rectal ozone at a dosage of 40µg/mL.



**Figure 1.** Abdominocentesis for culture and antibiogram.

Peritoneal fluid was collected via abdominocentesis (Figure 1) for a complementary diagnosis of rectal rupture. The results of the culture and antibiogram showed a bacterial culture of *Enterococcus sp.* which proved to be sensitive to vancomycin. Therefore, vancomy-

cin hydrochloride 20mg/kg was administered every 12 hours for 5 days, as well as dipyrone sodium to stabilize febrile conditions during treatment. At the end of the treatment, the animal's clinical signs had stabilized, with only difficulty defecating and reduced feeding, so it was discharged with a medical prescription for petroleum jelly, soybean oil, feed with a higher crude protein content, mineral salt and a supply of wet roughage.

## FINAL CONSIDERATIONS

In conclusion, the treatment of a ruptured rectum followed by secondary peritonitis was successful. However, after the intervention, the formation of fibrous tissue was observed in the region of the injury.

The possible long-term implications of the therapeutic approaches adopted for the mare remain unknown.

## REFERENCES

1. OLIVEIRA, N. F. O. et al. **Lavado peritoneal como adjuvante à terapia da peritonite em equinos.** Ciência Veterinária nos Trópicos, Recife-PE, v. 17, n. 3, p. 80 – setembro/dezembro 2014.
2. GODTFREDSSEN, S. M. et al. **Correção cirúrgica de ruptura retal com auxílio de endoscópio:** relato de caso. Revista Acadêmica: Ciência Animal, v. 15, p. 255–256, 21 jul. 2017.
3. SILVA, T. J. F. et al. **Avaliação anatomopatológica das complicações da peritonite fecal em equinos tratados com lavagem peritoneal.** Acta Scientiae Veterinariae, Pirassununga-SP, v. 46, n. 1, p. 1-6 - 24 ago. 2018.