



ULST Timisoara
**Multidisciplinary Conference on
Sustainable Development**
15-16 May 2025



STUDY ON THE INITIAL CLINICAL ASSESSMENT OF COLIC IN STUD FARM CONDITIONS

Liliana CARPINISAN ¹, Flavia BOCHIȘ ^{2*}, Alexandra Bianca ȚÎRNEA ³, Nicolae MOLDOVAN ³, Codruța CHIȘ ⁴, Cristian ZAHA ¹, Adrian STANCU ¹, Dorin Alexandru VIZITIU ¹, Alina Dușanca GHIȘE ^{1*}

¹ ULS "Regele Mihai I" from Timișoara, Faculty of Veterinary Medicine, e-mail: lilianacarpinisan@usvt.ro

² ULS "Regele Mihai I" from Timișoara, Faculty of Bioengineering of Animal Resources, e-mail: flavia25cai@gmail.com

³ Hilfevet 2009, Ghiroda, Timiș

⁴ University of Life Sciences "Regele Mihai I" from Timișoara, Faculty of Agriculture

* Corresponding author: flavia25cai@gmail.com, alinaghise@usvt.ro

Abstract: Colic is a relatively common problem in equine pathology, associated with a high degree of morbidity and mortality despite numerous preventive actions and regular treatments. The etiopathogenesis of colic includes digestive and non-digestive causes, with gastrointestinal ones being predominant. Most often, analgesic therapy is sufficient to control colic, but in more severe cases, the prognosis can be considerably improved by early detection and rapid referral for intensive care or surgery. For this reason, the present study aims to address the identification of useful parameters in the initial clinical assessment of colic in horses, which can help the veterinarian in choosing the appropriate therapeutic approach. The study was conducted on 30 leisure horses with colic syndrome, from a national stud farm, over a period of three years. The horses belonged to the Ardennes and Nonius breeds and were aged between 2 and 17 years. The following parameters were monitored: body temperature, intestinal peristaltic sounds, abdominal distension, respiratory frequency, heart rate, capillary refill time, apparent mucous membranes, and the presence of constipation or diarrhea. Also, the type of feed, depending on the season, and the possible presence of geophagia were taken into consideration. Based on the clinical examination and the history of the patients, digestive colic was the most frequently diagnosed type, with three degrees of severity: mild, moderate, and severe. Analyzing the values of the investigated parameters in relation to the severity of colic, it was found that there is a dependence between the degree of severity of digestive colic and the peristaltic sounds determined by auscultation. Thus, auscultation of intestinal sounds is highly recommended as a parameter in the initial clinical evaluation of a horse with colic syndrome.

Keywords: horse, colic, clinical assessment, peristaltic sounds

• Introduction

Colic is one of the most common and significant medical emergencies in equine veterinary medicine, having a major impact on horse health and welfare. The term "colic" refers to abdominal pain that can stem from a variety of causes, ranging from mild gas accumulation to severe conditions such as intestinal torsion that require emergency surgical intervention (White & Theodoroff, 2020).

The incidence of colic in horses varies, but epidemiological studies estimate that between 4% and 10% of horses experience a colic episode annually (Kaneene et al., 1997). This makes colic one of the leading causes of morbidity and mortality in the equine population. Additionally, colic recurrence is a persistent concern for both horse owners and veterinarians, further emphasizing the need for effective prevention strategies. Most cases of equine colic are mild and can be effectively managed with medical treatment, particularly the administration of analgesics such as non-steroidal anti-inflammatory drugs (NSAIDs) (Van Hoogmoed & Snyder, 2012). However, in more severe or complex presentations—such as strangulating obstructions or large colon volvulus—analgesic therapy alone is insufficient. In such instances, early diagnosis and timely referral to a specialized facility for intensive medical management or surgical intervention are critical for improving survival rates (White, 2009). The prognosis of severe colic cases dramatically improves with rapid identification and prompt action, underscoring the importance of clinical vigilance and advanced care accessibility (Proudman, 2005). Delayed intervention in surgical cases has been repeatedly associated with higher mortality, longer recovery, and increased complications.

The costs associated with equine colic represent a major financial concern, and include medical treatment, surgical procedures, recovery time, and economic losses in cases of death. According to Proudman et al. (2002), colic accounts for significant financial losses in the equine sector, especially among performance and high-value horses. Furthermore, the psychological stress and emotional burden placed on owners during colic episodes are not to be underestimated.

Given these factors, colic remains a central concern in equine veterinary medicine, not only from a diagnostic and therapeutic standpoint but also in terms of research, prevention, and owner education. For this reason, the present study aimed to address the identification of useful parameters in the initial clinical assessment of colic in horses, which can help the practitioners in choosing the appropriate therapeutic approach.

• Material and method

The study was conducted on 30 leisure horses with colic syndrome, from a national stud farm, over a period of three years. The horses belonged to the Ardennes and Nonius breeds and were aged between 2 and 17 years.

The following parameters were monitored: body temperature, intestinal peristaltic sounds, abdominal distension, respiratory frequency, heart rate, capillary refill time, apparent mucous membranes, and the presence of constipation or diarrhea. Also, the type of feed, depending on the season, and the possible presence of geophagia were taken into consideration.

The statistical function of Microsoft Excel was used for data analysis and interpretation.



• Results and discussions



• Conclusions

Following the analysis of 30 leisure horses with colic syndrome, 17 of the Ardennes breed and 13 of the Nonius breed, the following were observed:

- the prevalence of the syndrome was higher in the Ardennes breed compared to the Nonius breed;
- in the Ardennes breed, females were predominantly affected, while in the Nonius breed, males were more affected;
- digestive colic was predominant in both breeds, within the age range of 6 to 14 years;
- the severity of digestive colic did not depend on the seasonal type of feed or geophagia;
- there is a correlation between peristaltic sounds determined by auscultation and the severity of digestive colic;
- there is no correlation between abdominal distension and the severity of digestive colic syndrome;
- the presence of constipation is dependent on the severity of the colic syndrome;
- for both breeds, the values of heart and respiratory rates were within physiological limits;
- the appearance of mucous membranes was normal in 64% of the cases;
- in 87% of the cases, the capillary refill time was 2 seconds, while in 13% of the cases it was 3 seconds.

Given the importance of early diagnosis in the treatment of colic syndrome, it is highly recommended that practitioners in equine farms pay closer attention to the auscultation of peristaltic sounds as a basic clinical indicator that may suggest a severe progression of colic syndrome.