## Gastritis, Enteritis, and Colitis in Horses

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### **KEYWORDS**

Enteritis 
Gastritis 
Colitis 
Horse

### **KEY POINTS**

- The most prevalent bacterial causes of enteritis/colitis include *Clostridium perfringens* type C, *Clostridium difficile*, *Clostridium piliforme*, *Salmonella* spp, *Rhodococcus equi*, *Ehrlichia risticii*, and *Lawsonia intracellularis*.
- Equine rotavirus and coronavirus are the most prevalent viral agents of enteric disease.
- Cryptosporidium parvum and strongyles are the most prevalent parasitic agents of enteric diseases in this species.
- Nonsteroidal antiinflammatory drugs are responsible for ulceration of most of the alimentary tract.

### INTRODUCTION

There are a large variety of infectious and noninfectious inflammatory diseases that affect the gastrointestinal system of horses (Table 1).<sup>1–8</sup> For many years the percentage of these conditions in which a cause was found was low, but increased knowledge along with more and better laboratory diagnostic techniques now available for routine use in diagnostic laboratories has increased the number of cases with a confirmed cause. Nevertheless, there is a still a significant percentage of severe inflammatory conditions of the intestinal tract in which a cause is never found; this is frustrating for pathologists, clinicians, and owners. Frequently in the past and occasionally nowadays, severe, often fatal enteric inflammatory lesions of horses of unknown cause were referred to as colitis X. Because the name colitis X does not refer to a specific disease condition, but rather to a group of unknown causes that lead to a similar lesion and clinical outcome, it has been recommended that this term be no longer used. This recommendation is further supported by several enteric diseases of horses having been better characterized in recent years, and it has been shown that several different

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Table	1
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Summary of clinical signs, pathologic changes, and diagnostic tools and criteria for the main causes of enteric disease in horses

Agent or Disease	Main Clinical Signs	Main Age Affected	Main Pathologic Findings	Diagnostic Tools/Criteria	
				Presumptive	Definitive
Gastric ulceration	Usually asymptomatic	All ages	Ulceration (mostly pars esophagea)	Clinical signs	Gastroscopy; gross changes
Clostridium perfringens type C	Diarrhea, colic, fever, sudden death	Neonates; adults may occasionally be affected	Enterotyphlocolitis, necrotizing	Clinical signs; gross and microscopic findings; isolation of <i>C perfringens</i> type C from feces/ intestinal content	Detection of beta toxin in feces/intestinal content (ELISA)
Clostridium difficile	Diarrhea, fever, dehydration, colic	All ages	Enterotyphlocolitis, necrotizing; mucosal edema; volcano lesions	Clinical signs; gross and microscopic findings; isolation of toxigenic C difficile from feces/ intestinal content	Detection of toxins A and/ or B of <i>C difficile</i> in feces/ intestinal content (ELISA)
Clostridium piliforme	Diarrhea, weakness, lethargy, anorexia, dehydration, fever, icterus	Foals	Colitis, hepatitis, myocarditis	Clinical signs; gross findings	Microscopic findings; PCR; culture of <i>C piliforme</i> in embryonated egg
Salmonella spp	Diarrhea, colic, fever	All ages	Enterotyphlocolitis, necrotizing	Clinical signs; gross and microscopic findings	Detection of Salmonella spp in feces/intestinal content by culture and/ or PCR
Rhodococcus equi	Diarrhea, colic	Foals, up to 5 mo of age	Colitis, pyogranulomatous	Clinical signs; gross and microscopic findings	Detection of virulent strains of <i>R equi</i> in feces/ intestinal content by culture and/or PCR

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