



Management of chronic diarrhoea in the adult horse

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Chronic diarrhoea is defined as diarrhoea that is present for more than several days with little if any improvement. There is no consensus and different investigators use different cutoff points from 7 days to 1 month. Chronic diarrhoea is usually a sign of large intestinal or colonic disease, caused either by physical damage to the colon wall or physiological disturbances of colonic function. Chronic diarrhoea can arise from a plethora of disease conditions due to inflammatory causes or imbalance of normal physiologic processes. These include chronic parasitism, salmonellosis, inflammatory bowel diseases, alimentary lymphoma, right dorsal colitis, sand enteropathy, chronic non-specific colitis, idiopathic colonic dysfunction and peritonitis. Non-inflammatory causes could be related to alteration of fermentation of microorganisms in the hindgut or extra-intestinal causes such as liver disease.

In some cases, chronic diarrhoea is a consequence of an acute diarrhoeic episode and in other cases, there are episodes of chronic diarrhoea interspersed with periods of normal faeces. Faecal consistency is frequently reported to vary from watery to semi-solid. These patients often also report weight loss and colic. Horses may not only have production of watery faeces, but may also have “free faecal water”, where horses could even produce normal faeces, with faecal water produced covering the tail and legs.

Most diseases that result in chronic diarrhoea present with very similar clinical and clinicopathological findings. Also, many of the mechanisms of chronic diarrhoea are poorly understood. Therefore, horses with chronic diarrhoea are diagnostic and therapeutic challenges. A definitive diagnosis of cause of chronic diarrhoea is frequently only achieved in 60-70% of cases. Management and treatment of chronic diarrhoea very much depends on the primary cause. However, if this cannot be established, then specific treatment is not possible. In these cases, general and supportive therapeutic principles should be implemented.

General non-specific therapy for chronic diarrhoea includes fluid therapy, anthelmintics, motility modifying agents, probiotics, methods to reduce colonic inflammation, intestinal adsorbents and protectants, faecal microbiota transplantation and dietary modification.

As a hindgut fermenter, the horse is largely dependent on microbial production of volatile short-chain fatty acids for energy. The microbiota also plays an important role in the development of the mammalian immune system and maintenance of intestinal health by enhancing the intestinal epithelial barrier. New sequencing technologies have advanced our understanding of the complexity, diversity and richness of the equine intestinal and faecal microbiota. Whilst data implicating alterations of the microbiota as causes of disease are currently much stronger in other species, recent equine studies have provided support to the concept that ‘dysbiosis’ could be an important inciting cause of various types of disease. With advanced sequencing technologies emerging, one potentially important area of study involves the therapeutic manipulation of the gastrointestinal microbiota in equine cases. Chronic diarrhoea, although uncommon in the horse, has anecdotally responded to treatment with faecal microbiota transplantation (FMT). These findings do lend support to the potential efficacy of FMT in horses. Diseases such as IBD and colitis may be associated with perturbations in the mucosal microbiota, and developing preparations to restore the mucosal microbiota health might be useful in ameliorating clinical signs, such as chronic diarrhoea. Research is needed to determine the core microbiota required for equine GI health and investigate the efficacy of FMT for treatment of specific equine diseases, including acute and chronic diarrhoea. With recent developments in understanding how the microbiota changes in various disease states, therapies aimed at microbiota restoration may represent the next step in equine gastroenterology.