

## **DIARRHOEA IN HORSES AND FOALS**

Although we see many cases of diarrhoea in equines of all ages, the cause is often elusive and we have to apply general treatment regimes. The percentage of horses with diarrhoea in which a firm *ante mortem* diagnosis is made has been variably reported as between 10 and 20%. In many cases the cause may be undeterminable as the inciting factors may have “been and gone” by the time the horse is examined and perhaps related to dietary changes etc.. There is increasing recognition that infectious agents and/or their associated toxins are of major pathogenic importance in equine diarrhoeas and there are several test procedures now available to improve our diagnostic rate and help select more targeted therapy and prevention strategies.

### **Faecal examinations in horses and foals**

Faecal samples can be usefully analysed for

- nematode egg counts
- nematode larvae
- *Clostridial* toxins
- aerobic or anaerobic enteropathogens
- the presence of blood
- the presence of sand

Testing is available for toxins of *Clostridium difficile* (toxins A&B) and also *Clostridium perfringens* enterotoxin. These toxins are readily detectable in faecal samples using enzyme immunoassay tests and positive results infer either *Clostridial* enterocolitis or areas of severely compromised or necrotic bowel with secondary *Clostridial* infection (e.g. neoplasia). Anaerobic culture for *Clostridia* is often uninformative. *Clostridium difficile* is very difficult to culture on submitted samples due to its difficult growth requirements and extremely strict anaerobic requirements often leading to its death in transit. *Clostridium perfringens* is a normal gut constituent of horses and therefore identification of this bacterium does not imply aetiologic significance. Similarly many other bacteria such as *E. coli*, *Bacteroides* and *Enterococcus* are also of highly equivocal relevance when cultured. On the other hand aerobic culture of *Aeromonas*, *Campylobacter* and *Salmonella sp.* are probably relevant to diarrhoea. Intermittent shedding of salmonellae may lead to false negative results and repeat samples are always advisable.

The presence of sand in faecal samples is of debatable relevance. Sand enteropathy is common in certain parts of the country as the cause of weight loss syndromes, diarrhoea and/or colic. However, the presence of fairly large quantities of sand may be normal in some horses on certain pastures and the finding of sand in faecal samples only really indicates that the horse is ingesting large quantities of sand and doesn't always necessarily imply aetiologic significance.

Faecal occult blood tests can be performed in horses to investigate distal intestinal bleeding, however blood loss in the proximal intestinal tract such as stomach and duodenum is highly unlikely to be detected in faecal samples due to considerable degradation in the colon.

The ‘usual suspects’ include *Rotavirus* and *Cryptosporidium* in foals and *Salmonella sp.* in all age groups. Other pathogens of potentially major importance both in foals and adult horses include *Aeromonas sp.*, *Clostridium difficile* and *Clostridium perfringens*.

Pathogen	Estimated prevalence (up to)		Test*
	Foals	Adults	

<i>Rotavirus</i>	40%	-	ICT
<i>Cryptosporidium</i>	20%	-	ICT
<i>C. difficile</i>	20%	20%	ELISA (TOX A/B)
<i>C. perfringens</i>	20%	20%	ELISA (CPE)
<i>Aeromonas sp</i>	10%	50% <sup>#</sup>	Culture
<i>Salmonella sp.</i>	5%	5%	Culture

(\* all tests performed on faecal samples; <sup>#</sup> based on only one publication)