FOX VALLEY EQUINE PRACTICE

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Potomac Horse Fever

Definition

Potomac horse fever (PHF) is a disease in horses primarily resulting in diarrhea and fever due to infection with the bacteria, *Neorickettsia risticii*. Historically, horses living in the area of the Potomac River Valley made up the majority of cases. Currently, PHF has been reported in most states but is most prevalent in the northeast, mid-Atlantic, and western parts of the United States.

Pathophysiology

Horses become infected with the causative agent of PHF, *Neorickettsia risticii,* by ingesting fresh water snails or aquatic insects infected with this bacteria. Specifically, Caddis flies are commonly implicated in disease transmission. The snails and insects become infected with the bacteria by ingesting trematodes (flatworms/flukes) infected with the bacteria. It is quite the life cycle! Because of these intermediate hosts required in the transmission of the bacteria, horses living near bodies of water in endemic areas (areas where PHF cases occur) are more at risk. Once infected, the bacteria enter the cells lining the digestive tract resulting in damage to the intestinal lining and diarrhea. The incubation time, or time from infection with the bacteria to signs of clinical disease, is 10-18 days.

Clinical Signs

Horses typically present with diarrhea due to acute colitis, or inflammation of the colon. Inappetence, lethargy, colic, and fever often accompany the diarrhea. Luckily, many horses infected with the bacteria never develop clinical signs and the infection goes unnoticed. Of the horses who develop clinical signs, 20-30% exhibit signs of laminitis. In some cases, horses present to their veterinarian first for laminitis and go on to develop diarrhea later on in the course of disease. Abortion can occur in pregnant mares who become infected.

Diagnosis

Often the clinical signs of acute colitis produced by infection with *Neorickettsia risticii* are clinically indistinguishable from other causes of infectious colitis such as Salmonella. A thorough history and physical exam are performed first to help narrow down the list of differential diagnosis. Blood work including a complete blood count and chemistry are helpful as well. Abdominal ultrasound may be used as an adjunctive diagnostic looking for changes in the bowel wall or intestinal contents. A blood sample can be submitted to specifically test for infection with or exposure to *Neorickettsia risticii*. A fecal sample can be submitted as well for testing. This is the most definitive way to diagnose PHF.

Treatment

Intravenous oxytetracycline or oral doxycycline are the antibiotics of choice to treat PHF. Anti-inflammatories such as Banamine are prescribed in addition to antibiotics. Intestinal protectants like Bio-Sponge may be used in addition to probiotics, and a highly digestible fiber feed like a complete pelleted ration. IV fluids are administered in some cases to support hydration and electrolyte status. In severe cases, plasma may be necessary.

Prevention

PHF is not transmissible horse to horse, so once a diagnosis of PHF is made, it is not necessary to separate the affected horse from the others. There is a vaccination available to help decrease the severity of disease in horses infected with the bacteria. It is recommended to vaccinate horses in the late spring prior to the seasonal incidence of disease.