

**“I have a friend who had her yearling looked at for depression and minimal appetite. The colt is small for his age and also had some swelling on his belly. The vet diagnosed it as lawsonia. I’ve never heard of this disease before. Can you explain a little more about it and is it treatable?”**

*Lawsonia intracellularis* is the causative agent of equine proliferative enteropathy (EPE). The organism was previously associated with proliferative enteropathy in pigs, but has now become an important pathogen in horses over the last ten years. The organism is found within the cells of the small intestinal lining. The resulting inflammation leads to malabsorption and weight loss. When the cells slough into the intestinal lumen, they are shed in the feces. While the spread of the organism is still largely unknown, it is possible that there may be fecal-oral transmission. Clinical cases in horses usually occur as isolated incidents although several herd outbreaks have been reported. The source of infection remains unknown.

Equine proliferative enteropathy generally affects foals 4 to 6 months of age, although it can be seen as early as 2 months and as late as 12 months, and rarely in a mature horse. Affected horses tend to present during late fall or early winter. The most common clinical signs are diarrhea along with weight loss, colic, depression, anorexia, fever, pot-bellied appearance, and edema (jaw, abdomen, or legs). Initial diagnosis is normally based on clinical signs and blood analysis that shows low total protein and albumin levels. Typically, an abdominal ultrasound will show thickened, edematous small intestinal walls.

A definitive diagnosis can be made with a positive fecal PCR and/or a serum IPMA titer. The serology is more sensitive than the fecal PCR but can remain positive for 6 months after exposure. The most reliable diagnosis is a silver stain or PCR of a section of intestinal wall, but this can only be obtained through surgery or on postmortem cases.

Treatment consists of antibiotics that can penetrate the cellular wall such as oxytetracycline, doxycycline, or chloramphenicol. Severely affected horses may require several weeks of antibiotics and supportive care until albumin levels start to rise toward normal levels. Fluids such as Hetastarch, synthetic colloids, and/or plasma may be administered to support the low total protein levels. In addition, IV fluids may be necessary to correct dehydration and electrolyte imbalances.

Affected horses treated aggressively usually survive the infection. However, they may take months to regain body condition. Severely affected horses may not survive.

Until more is understood on the pathogenesis and spread of the organism, precautionary measures focus on good management practices. Be familiar with the clinical signs and have affected horses treated early. Separate affected horses from the rest of the herd until full recovery or cessation of fecal shedding. Shedding can be monitored by PCR. Maintaining good pest control and preventing non-equine animals from access to feed can minimize the risk of disease spread. There is research being conducted on a *L. intracellularis* vaccine administered intra-rectally, but nothing has been labelled for equine use.



Figure 1: Abdominal ultrasound of an EPE (Lawsonia) case. Arrowhead points to the outside wall of the small intestine. Arrow points the inside lumen of the small intestine. There is marked thickening of the affected small intestine.