

HAGYARD CARE

Equine Medical Institute

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LAWSONIA INTRACELLULARIS

ABOUT

Lawsonia intracellularis is the causative agent of Proliferative Enteropathy in the pig. In the last decade, the organism has also emerged as a significant pathogen in the horse. *L. intracellularis* is an obligate intracellular bacteria found in the proliferating crypt epithelial cells of the intestine. It causes hyperplasia or thickening of the walls of the intestinal tract which leads to malabsorption and protein loss. The disease in the horse is simply referred to as Lawsonia. The method of transmission in the horse is still unknown, but we think it is fecal-oral as it is in the pig.

CLINICAL PICTURE

Lawsonia is most common in young horses between two and eight months of age, but rarely adult horses may be affected. Horses present during late fall or early winter (August through January). The most consistent clinical sign in affected horses is subcutaneous edema followed by lethargy, diarrhea, fever, and colic. Horses may also have a pot belly appearance, poor haircoat, and weight loss. The most common finding on blood work is low total protein and low albumin levels. Most affected horses have an albumin level below 2.0 mg/dL (reference range: 3.4-4.1 mg/dL). Typically, the thickened, edematous intestinal walls can be visualized with transabdominal ultrasound.

DIAGNOSIS

Lawsonia is diagnosed by observation of typical clinical signs in conjunction with a positive fecal PCR and/or a serum IPMA titer greater than 1:60. For the most accurate diagnosis, a fecal sample as well as a blood sample in a red top tube should be submitted to the laboratory for analysis.

TREATMENT

Affected animals should be treated with an antimicrobial with good intracellular penetration. Oxytetracycline (LA 200),

chloramphenicol, and clarithromycin are all good choices. Metronidazole may also be used in conjunction with one of these antimicrobials. Antimicrobials should be given for at least several weeks or until the albumin level shows a trend upward toward the reference range.

Horses with severe edema (intestinal or subcutaneous) and those with very low protein levels should be given Hetastarch, a synthetic colloid, and/or plasma. Affected horses may also require intravenous fluid therapy to correct dehydration and electrolyte abnormalities.

PROGNOSIS

Affected horses that are treated aggressively usually survive the infection. However, these horses may take months to "catch up" to their herd mates in body condition. Severely affected horses may not survive.

PREVENTION

Until we know how the disease is spread and where the organism is harbored in the environment, taking precautions to prevent the disease is impossible. Instead, be familiar with clinical signs of the disease so that infected horses can be diagnosed and started on appropriate therapy quickly.

