



Equine Pythiosis

The Educated Horseman: Disease Series



Equine pythiosis, commonly referred to as swamp cancer, is becoming more prevalent in horses across the southern region. Pythiosis is a fungus-like infection that can affect the skin, bones, intestines, lungs and arteries of horses and other animals. It is caused by the organism *Pythium insidiosum*. *Pythium insidiosum* is traditionally thought of as an aquatic fungi or water mold and typically occurs in wetland conditions. However, floods and heavy rains can spread the organism to new areas.

Pythiosis typically begins as a small irritation or wound that does not heal, allowing the organism an entry point. The non-healing wound quickly develops granulation tissue and creates necrotic cells that form into yellow or gray pea-sized, coral-like structures called kunkers. The lower limbs of horses are more commonly affected with the tumor-like lesions due to the increased exposure to wet and grassy environments where the organism lives. Fortunately, pythiosis cannot be spread from animal to human or animal to animal, and the animal cannot “infect” the area in which it lives. Researchers believe the tissue destruction is caused by a massive allergic reaction to the presence of the fungus. While a small portion of horses — approximately 5 percent — are able to modulate the allergic response and will eventually begin to heal, most horses need early medical intervention to prevent the lesions from spreading.



Left front limb of horse diagnosed with pythiosis. Photo credit: Dr. Neely Walker



Left front limb of a horse diagnosed with pythiosis treated only with essential oils. Photo credit: Dr. Neely Walker

A simple blood test is used to diagnose pythiosis. However, there are few treatments available. Despite the organism's fungus-like structure, it is not a true fungus; therefore, most anti-fungal medications are not effective. Variable results have been produced by using topical and internal essential oils. Research has shown that use of topical essential oils in combination with systemic anti-fungal medications may be an effective early treatment option. The most effective current treatment option is an immunotherapy vaccine that addresses the allergic reaction in response to the organism. Researchers have developed a vaccine that has been 100 percent effective at treating pythiosis cases that are under 15 days old. The treatment is less effective in cases over 60 days old; however, the overall cure rate for the vaccine is 75 percent. This suggests that early diagnosis and treatment are crucial for long-term success.

The recent floods and an increase in wet humid conditions have created perfect conditions for pythiosis infections to increase. In order to diagnose pythiosis early enough to provide effective treatment, it is important for horse owners to pay careful attention to any injuries their horses may sustain. If you suspect your horse may have pythiosis, contact your veterinarian immediately.

References:

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Treatment of a horse diagnosed with Pythiosis with immunotherapy vaccine. Photo credit: Dr. Brennan Lee.

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Pub. 3609 (Online Only) 10/17

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