

Pigeon Fever – The basics

Pigeon fever, also known as Dryland Distemper, refers to an infection caused by a bacterial organism called *Corynebacterium pseudotuberculosis*. The term “Pigeon fever” came about due to the abscess formation this organism often causes on the pectoral muscles giving the horse a pigeon breast appearance. The bacterium is responsible for many different types of diseases in many species of animals and it can even infect humans. Even though goats, sheep and cattle can become infected with the organism, there appears to be little to no cross-species transmission (meaning your goat cannot give it to your horse or vice versa).

In the horse there are three recognized forms of the disease: ulcerative lymphangitis, external and internal abscesses. A solitary external abscess is the most common form of the disease and is usually located on the underneath side of their belly or pectoral region. The abscess can be quite large and have a thick capsular wall (up to 10cm) which can make them difficult to drain without lancing them. The abscesses are usually filled with a thick yellow to tan odorless material. Once the abscess is opened up and allowed to drain, the horse usually heals with out complications. Horses can also get internal abscesses due to *Corynebacterium pseudotuberculosis* which occurs less commonly than the external abscesses. The internal abscesses can be difficult to diagnose as the most common symptoms are weight loss, fever, depression, and colic symptoms. The most common site for horses to get internal abscesses is the liver, but they have also occurred on the kidneys, lungs, and spleen. The last and rarest form of the disease is ulcerative lymphangitis which occurs on the lower limbs and presents as a severe cellulitis with abscesses that may affect one or more limbs at one time. These horses are usually febrile, extremely sore on the affected limb and in many cases they are non-weight bearing lame.

Diagnosis of pigeon fever usually results from a culture of a non-ruptured abscess for the external abscess form and ulcerative lymphangitis as well as the clinical appearance and location of the abscess. Internal abscesses due to *Corynebacterium pseudotuberculosis* can be more difficult to diagnosis due to the vague clinical signs with which it usually presents. A blood test does exist for the exposure to the bacterium, and it can be very helpful in diagnosing horses with internal abscesses. However, this test has many limitations and it is not always diagnostic, especially in the case of external abscesses.

After a diagnosis has been made, treatment usually entails opening up and draining the abscess for those with external abscesses and starting long-term antibiotic therapy in those with internal abscesses or ulcerative lymphangitis. The prognosis in horses with external abscesses is very good with 90% of horses recovering without any complications. Although many horses survive infections due to internal abscesses and ulcerative lymphangitis, the outcome is not always as successful when compared to those with external abscesses. Horses with ulcerative lymphangitis often suffer from some degree of permanent swelling and many horses continue to suffer from a chronic lameness despite antibiotic therapy. Internal abscesses pose the most serious threat, as there was a 24% fatality rate reported in treated horses in one study. On a more positive

note, the chance of a horse becoming infected again with *Corynebacterium pseudotuberculosis* for a second time is very low, regardless of the form with the horse was infected.

The exact method of transmission to the horse is still under investigation, but insects are believed to be involved. Therefore, using good insect control and isolating infected horses may be helpful in minimizing the spread of the disease. The organism is capable of living in the soil which most likely provides an ongoing source of infection and also makes complete eradication unlikely. The disease appears to most common in the fall and winter months, especially after a good rain when the insect numbers are at their highest.

No confirmed cases of *Corynebacterium pseudotuberculosis* transmission from the horse to humans has been reported, however, you should take precaution if Pigeon fever is suspected because people have been known on a rare occasion to contract it from other animals. Be sure to wear gloves and always wash your hands after dealing with any open abscess. If you suspect your horse may be suffering from Pigeon fever, contact your veterinarian.

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References:

Aleman, MR, Spier S: *Corynebacterium pseudotuberculosis* Infection. In Smith BP, ed: *Large Animal Medicine*, ed 3, St. Louis, 2002, Mosby, pp 1078-1083

Aleman M et other: Retrospective study of *Corynebacterium pseudotuberculosis* infection in horses: 538 case, *J Am Vet Med Assoc* 209:804-809, 1996