

Equine Disease Communication Center:



Pigeon Fever

Disease Name: Pigeon Fever (*Corynebacterium pseudotuberculosis* infection or ulcerative lymphangitis)

Disease Type: *Corynebacterium pseudotuberculosis* is a bacteria most often found in the Southwestern United States but reported throughout North America. Outbreaks in areas in which the bacteria had previously not been or only rarely reported have occurred during times of drought.

Transmission: The bacteria lives in soil, where it can survive for long periods of time. Horses are infected when the bacteria gains access to the body through small scrapes or wounds in the skin. Transmission likely occurs via insect vectors, direct horse-to-horse contact, and contaminated soil.

Frequency/Risk Factors: The incidence of Pigeon Fever is seasonal with the highest number of cases occurring during dry months in the summer and fall, predominantly in the Southwestern United States. The disease fluctuates from year to year due to environmental factors, such as rainfall, temperature, and horse susceptibility. The organism can survive for up to two months in hay and shavings and more than 8 months in soil. The presence of manure favors bacterial survival and replication.

Incubation period: 3-4 weeks

Carrier status: Horses can harbor the bacteria for 3-4 weeks prior to showing clinical signs. Transmission from an infected horse to a susceptible horse occurs by direct contact.

Shedding period: Horses with Pigeon Fever can shed bacteria from open wounds and draining abscesses.

Latency: Subclinical disease has not been demonstrated

Severity:

- External abscesses: Case fatality is very low
- Internal infection: Case fatality of 30-40%
- Lymphangitis: Causes limb swelling with severe lameness and commonly becomes chronic with limb swelling (edema) and recurrent infection.

Clinical signs and symptoms: There are three forms of Pigeon Fever: external abscesses, internal infection and ulcerative lymphangitis/limb infection.

External Abscesses

- Most common form of infection; can be single or multiple abscesses.
- Abscesses can occur anywhere on the body but are commonly located in the pectoral area (on the front of the chest thus the name “pigeon fever” or “pigeon breast”).
- Abscesses are well encapsulated and contain tan, non malodorous exudate (pus).

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- Horses with external abscesses are normally not ill. However, affected horses may
- develop a fever.
- Horses with external abscesses may also have internal infection, and systemic antimicrobial treatment may be necessary.

Internal Infection:

- Occurs in approximately 8% of affected horses, and is associated with a high case fatality rate (30 to 40%). Diagnosis can be challenging and long-term antimicrobial therapy is imperative for a successful outcome. The organs most commonly involved are the liver, kidney, spleen and lungs. Abortion due to placentitis or fetal infection has been reported. Internal abscessation may be identified 1-2 months following the peak number of cases of external abscessation.

Ulcerative Lymphangitis:

- Involves severe limb swelling with infection and abscessation of the lymphatics (vessels responsible for transporting fluid from the limbs back to circulation)
- Can affect one or more legs
- Severe lameness; as well as, fever, lethargy and anorexia can occur
- Chronic and recurrent infection can occur



Diagnosis: Bacterial culture of aspirate or exudate from the wounds/abscesses is used to identify the bacteria. Serologic testing can help diagnose internal abscesses. Ultrasound examination is helpful to identify and aspirate external and internal abscesses.

Treatment: External abscesses can generally be treated with drainage and flushing. Ulcerative lymphangitis and internal infection must be treated more aggressively with antimicrobial therapy, sometimes for extended treatment periods. Supportive therapies such as cold hosing and pressure wraps can be helpful for reducing limb swelling in horses with lymphangitis..

Prognosis: The prognosis for horses with external abscesses is good. The prognosis for internal infection or ulcerative lymphangitis is guarded.

Prevention: Currently there is no licensed vaccine for *Corynebacterium pseudotuberculosis* available in the United States. The use of an autogenous bacterin-toxoid vaccine has been shown to induce a host antibody response, but protection from disease has not been demonstrated..

Biosecurity: Sanitary wound management and surface disinfection is important for preventing environmental contamination when handling infected horses. There is no way to effectively eliminate the bacteria from the soil.

Zoonosis: Infection has been reported in equids, sheep, goats, cattle, buffalo, camelids, and on rare occasions, humans