Introduction

For the first time in recent history, Florida is seeing a large number of cases of pigeon fever in horses. As of June 2012, the state is reporting over 60 suspected equine cases in Okaloosa, Walton, and Marion counties (Florida Department of Agriculture 2012). The majority of cases have been confined to the Panhandle. Pigeon fever is caused by *Corynebacterium pseudotuberculosis*, which is a gram-positive, rod-shaped bacteria.

Horses and small ruminants typically get different strains of the infection, but cattle can get both types. In goats, the disease is known as caseous lymphadenitis, and affected animals will have external abscesses (typically found on the head, behind the ears, or on the neck, shoulder or flank). Abscesses also occur in horses and cattle infected with this bacteria. Natural transmission from horses to goats or vice versa is not thought to commonly occur. *Corynebacterium pseudotuberculosis* is a soil organism that can survive for months to years in direct sun. The largest number of cases is typically reported in the dry months of fall and winter.

How Pigeon Fever Affects Horses

Many things about this disease in horses are still not completely understood, such as the incubation period. The incubation period is the time it takes to develop clinical symptoms of the disease after being infected with the bacteria. In horses, the incubation period can vary and ranges from weeks to months. The bacteria can enter the horse through the skin, wounds, or abrasions in the mucous membranes. Horses with pigeon fever may have a poor appetite, fever, lethargy, swelling along the chest or ventral abdomen, and/or lameness. Three forms of the disease can occur in horses: 1) external abscesses, 2) internal abscesses, and 3) ulcerative lymphangitis.

Horses with the most common form of pigeon fever will develop external abscesses. These occur in about 90% of the cases. The disease got its name because abscesses will commonly develop in the pectoral region, which becomes swollen and painful. In addition to the pectorals, abscesses may form on the prepuce, mammary gland, axilla, limbs, inguinal region, head, and other areas. No breed or sex is predisposed to acquire the infection, although young horses may have some increased risk.

Horses with the second form of the disease will have internal abscessation, which has been reported in about 8% of cases. The most common site of internal abscesses is the liver, but they can be associated with other organs as well. The third form found in horses is ulcerative lymphangitis, which is a severe cellulitis that occurs in the fewest number of cases. Clinical cases of ulcerative lymphangitis have severe lameness and swelling of the limb or limbs.

Diagnosing Pigeon Fever

Definitive diagnosis of pigeon fever is made by culturing the bacteria from an abscess or draining wound. A blood test (called the synergistic hemolysis inhibition test) is
available but the results depend on the severity and length of infection. This means that a negative blood test (titer) does not rule out the disease. In fact, horses may have a negative blood test if they are in the early stages of the disease. The blood test is helpful if horses have internal abscesses, as the titers are typically very high (>1:512) (Aleman and Spier 2002). Ultrasound examination may be a helpful diagnostic tool in these cases as well, especially for identifying internal abscesses in the abdominal cavity.

**Treating Pigeon Fever**

Treatment of pigeon fever is accomplished by draining the external abscesses. The primary veterinarian should always be consulted about treatment. Abscesses should be allowed to mature, then drained and flushed with antiseptic solutions. Purulent material drained from abscesses is highly infectious and must be carefully handled and disposed. Collecting as much purulent material as possible into a waste bag for disposal is critical to reduce the risk of other horses being exposed. Also, properly dispose of any bedding from infected horses. Pain medication may be indicated for horses with severe or deep abscesses or lameness. Topical fly treatment around wounds and draining areas is critical to reduce the possibility of biting insects transmitting the infection. Systemic antibiotics may be utilized for treatment on a case-by-case basis. In routine cases with external abscesses, antibiotics may prolong the course of the disease and are typically not required. However, antibiotics are appropriate in cases with severe disease or a recurring infection. Long-term systemic antibiotics are required for treating horses with internal abscesses. Fortunately, *Corynebacterium pseudotuberculosis* is usually sensitive to most antibiotics (including penicillin), but culture and sensitivity of a sample of purulent material are recommended to direct therapy.

**Conclusion**

Unfortunately, no vaccine exists to prevent pigeon fever. It is recommended to isolate infected animals, especially if draining wounds or abscesses are present. Stalling affected horses will help reduce contamination of the pasture environment with infectious material. Ideally, horses should be treated in an area with concrete or rubber flooring that can be disinfected. Although no reports exist of humans being infected by horses, humans have reportedly been infected by the sheep strain of the disease. Infection in people has occurred from consuming infected unpasteurized milk or milk products, contacting infected animals, handling contaminated equipment, or exposing wounds to infected material. Therefore, it is recommended that people wear gloves when handling infected horses. Fly sprays and feed through fly control may both be beneficial for insect control. If you suspect your horse is exhibiting signs of pigeon fever, contact your veterinarian for a thorough examination.

**References**
