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Ringworm (Dermatophytosis)

Definition

Dermatophytosis is a highly contagious fungal skin infection in horses more commonly known of as ringworm. Other common names for this condition include girth itch and muck itch. The three most common dermatophyte species involved are *Trichophyton equinum*, *Trichophyton mentagrophytes*, and *Microsporum gypsum*. Ringworm infections in horses typically begin as small, raised, hairless spots on the face, girth area, shoulder, or armpit. Risk factors for the development of ringworm include age extremes (horses less than two years of age and very old horses), inadequate housing, poor nutrition, warmth and humidity, overcrowding, and a compromised immune system.

Transmission

Horses can develop a ringworm infection through direct contact with an already infected horse or indirectly through fomites (contaminated brushes, tack, blankets, etc). The fungi live in the soil, and can also cause disease in horses while they are lying or rolling on the ground. Ringworm is quite resistant in the environment and can remain on fencing or other structures for extended periods of time serving as another source of infection. Horses most commonly become infected through contact with contaminated brushes and tack. Ringworm is technically a zoonotic disease, meaning horses can transmit the fungal infection to other animals including humans. While highly contagious between horses, it is fairly uncommon to spread the infection to people.

Clinical Signs

Clinical signs of ringworm typically begin as papules, or small raised circular bumps on the skin. These bumps tend to lose the overlying hair and become crusty. Often times, the center of the circular lesion shows signs of healing, thus giving the lesions a “ring” like appearance. The lesions are not typically very itchy for the horse. The most common areas for development of lesions include the girth area, axilla (armpit), face, and shoulder. The lesions tend to only spread to the rest of the body in immunocompromised horses or foals.

Diagnosis

Skin scrapings of an area of alopecia (hair loss) using a spatula tool or scalpel blade are often performed initially for microscopic examination. While this may not give a definitive diagnosis, it is an important way to help rule out other common causes of skin lesions. The most definitive way to diagnose ringworm is with a fungal culture using a plucked hair or skin scraping. Biopsy may be performed but is not as sensitive as a fungal culture.

Treatment

Ringworm is generally a self limiting disease over a 5-10 week period. Spontaneous regression is common as a horse develops immunity. Younger horses typically take a longer period of time to recover than older horses. If treatment is necessary, topical lime sulfur or chlorhexidine/miconazole based shampoos applied directly to the affected area are very effective. Environmental decontamination including disinfecting tack and brushes should be performed using a 6% bleach solution or another sporicidal disinfectant. Systemic antifungals are usually unnecessary.