Understanding and Managing *Streptococcus equi* ssp *equi* (Strangles) in Horses

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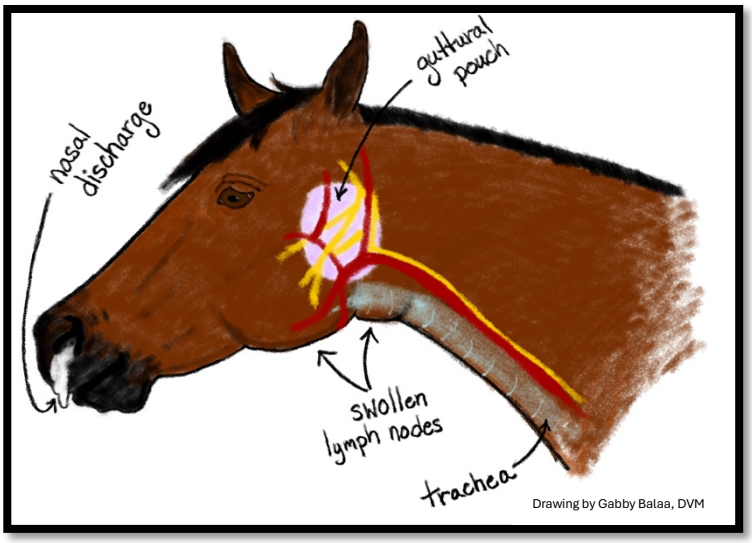
Etiology

Streptococcus equi ssp *equi*, commonly known as Strangles, is a highly contagious bacterial infection that affects horses worldwide. The bacterium primarily targets the upper respiratory tract, including the lymph nodes of the head and neck. Transmission occurs through direct contact with infected horses or indirect contact with contaminated equipment, water troughs, or human handlers. The bacteria can survive in the environment for several weeks, particularly in moist or cool conditions, making it a persistent threat in equine populations. *Streptococcus equi* ssp *equi* is highly host-specific, meaning it primarily affects horses, donkeys, and mules, with young or immunocompromised animals being most susceptible.



Clinical Signs

The hallmark clinical signs of Strangles include fever, lethargy, and nasal discharge, which may progress from serous to mucopurulent. Swelling and abscessation of the submandibular and retropharyngeal lymph nodes are characteristic, often leading to difficulty swallowing, respiratory stridor, and, in severe cases, airway obstruction. Some horses may develop "bastard strangles," a rare but serious complication where the infection spreads to internal organs such as the lungs, liver, or brain. Atypical or mild cases may present with only subtle signs, such as a low-grade fever or mild cough, making diagnosis challenging. Clinical signs typically appear 3–14 days post-exposure.

Diagnosis

Diagnosis of Strangles is based on clinical signs, history of exposure, and laboratory testing. Nasopharyngeal swabs or washes and guttural pouch washes can be cultured to

identify *Streptococcus equi* ssp *equi*, though PCR testing is increasingly preferred due to its higher sensitivity and faster turnaround time. Blood tests, such as serology, can detect antibodies to the bacterium, but these are more useful for identifying past exposure or carrier status rather than acute infection. Endoscopy may be used to assess guttural pouch involvement, as chronically infected horses often harbor the bacteria in these structures, serving as reservoirs for transmission.

Treatment

Treatment for Strangles is primarily supportive, as most cases resolve without antibiotic intervention. Anti-inflammatory medications can help reduce fever and lymph node swelling. Warm compresses applied to abscessed lymph nodes may encourage rupture and drainage, which is critical for recovery. Antibiotics are reserved for severe cases or complications like bastard strangles, as use in uncomplicated cases may delay abscess maturation and prolong recovery. Horses with guttural pouch involvement may require endoscopic lavage and local antibiotic treatment. Strict isolation of infected horses is essential to prevent spread.

Prevention

Vaccination is a key preventive measure if the horse's blood titers are low, though no vaccine provides complete protection. Both modified-live intranasal and injectable killed vaccines are available, with the intranasal option generally offering better mucosal immunity. Vaccination is particularly recommended for horses in high-risk environments, such as boarding stables or show grounds. However, vaccination of acutely infected or exposed horses is contraindicated, as it may exacerbate clinical signs. Regular health monitoring and prompt isolation of symptomatic horses are critical to preventing outbreaks. Owners should take their horse's rectal temperature 1-2 times per day and isolate immediately if abnormal (>101.5 F) because bacterial shedding begins 2-3 days after onset of a fever.

Biosecurity Considerations

Effective biosecurity measures are essential to controlling Strangles. New arrivals to a facility should be quarantined for at least 2–3 weeks. During outbreaks, horse movement on and off the property should cease until the quarantine period is past (3 weeks after the last infected horse's nasal discharge stops). Equipment, tack, and water sources should not be shared between horses, and handlers should practice strict hygiene, including handwashing and disinfection of boots and clothing. Environmental decontamination with disinfectants effective against *Streptococcus equi* ssp *equi*, such as bleach or iodine-based solutions, is crucial. Light (UV) exposure kills the bacterium. Guttural pouch carriers should be identified and treated to eliminate bacterial reservoirs.

Reportable Disease Status in Missouri

In Missouri, Strangles is not classified as a reportable disease. However, horse owners and veterinarians are encouraged to report outbreaks to state animal health officials to facilitate tracking and containment efforts. Proactive communication with neighboring facilities and event organizers can help mitigate the spread of the disease. If you are traveling such as for trail rides, shows, or sales, visit the Equine Disease Communication Center website to monitor real time alerts and information posted to help prevent and mitigate equine infectious disease spread.

Conclusion

Strangles remains a significant concern for horse owners due to its highly contagious nature and potential for severe complications. Develop a good working relationship with your veterinarian. Understanding the etiology, clinical signs, and diagnostic methods is critical for early detection and management. Supportive care, judicious use of antibiotics, and robust biosecurity practices are essential for controlling outbreaks. While vaccination plays a role in prevention, it is not a substitute for sound management practices. By staying vigilant and implementing strict biosecurity measures, horse owners can protect their animals and contribute to the broader effort to control this disease.