

STRANGLES

Recent outbreaks of strangles on farms through-out the North Okanagan and Shuswap have generated considerable attention and concern from horse-owners. This article summarizes the disease, how it is spread, its clinical signs, treatment and prevention.

The Disease

Strangles is an acute, highly contagious disease of the upper respiratory tract of horses. It is caused by *Streptococcus equi*, a bacteria that infects horses only. Strangles has a world-wide distribution and occurs in horses of any age; however, young horses (1 to 5 years old) are particularly susceptible. The bacteria is transmitted in the discharges of infected horses by direct contact or via environmental contamination. Under favorable environmental conditions, the bacteria may remain viable for a year or more on bedding, pasture, feed, or utensils. The spread of infection is rapid and morbidity (percentage of exposed horses that actually get sick) is high, often 100 percent. Mortality, however, is low and is usually associated with the disease spreading to other organs (this is referred to as 'bastard strangles'). Horses that appear to have recovered from strangles may shed the organism in nasal secretions for months and even years. Consequently, there is an increased risk of strangles on premises where the horse population is large or where the turn-over rate is frequent (breeding farms, stallion stations, competition grounds etc.).

Infection occurs by ingestion or inhalation. The bacteria invades the nose, throat and mouth causing severe inflammation and pain in these areas. Spread then occurs to the tonsils and lymph-nodes of the throat area. These tissues develop abscesses that eventually rupture and drain externally or, less commonly, internally into the throat or guttural pouches. If the abscesses are able to drain completely, healing is usually uneventful.

Occasionally, 2 types of complications occur. These are bastard strangles and a condition known as 'purpura hemorrhagica'. With bastard strangles abscesses can develop in the lungs, liver, spleen, kidneys or even in the brain. Purpura hemorrhagica refers to the horse's immune-system attacking his blood vessels, causing them to leak fluid into the surrounding tissues. The reaction varies from mild to severe or even fatal, but consistent features include some form of swelling under the skin of the face, limbs or abdomen and bruising on the gums and inside the nostrils.

What does a horse with strangles look like?

Within 2-10 days of infection, depression, inappetance and marked fever (103 to 105 degrees F; 39.5 to 40.5 degrees C) occur. Inflammation of the upper respiratory tract results in painful swallowing, a soft, moist cough, and a nasal discharge which becomes thick and yellow. The head and neck are often held outstretched and the upper throat is painful when palpated. Within 2-3 days the lymph nodes below the jaw begin to swell and become hot and painful as abscessation develops. Swelling of the lymph nodes around the trachea may be enough to cause airway obstruction and difficulty breathing occurs (a feature that gives the disease its name). Without aggressive veterinary intervention these horses often die. Rupture and drainage usually occurs some 10-14 days after the onset of clinical signs and resolution of the disease takes 3 to 6 weeks. However, in severe infections recovery can take considerably longer.

If infection spreads to other organs, the signs you see will depend on the organ involved. Often pneumonia develops. Depression, anorexia, high fevers, and colic are other symptoms.

Treatment

Affected horses should be isolated, kept warm and dry and offered moist, soft, palatable foods (soaked beet-pulp, bran mashes). Abscess should be hot-packed to encourage rupture and drainage. If swelling is severe abscesses can be lanced and flushed. Anti-inflammatory medication to reduce pain and fevers should be used. Historically there has been controversy as to whether antibiotics should be used. The belief being that too small a dose or treatment for too short a time-period may predispose the horse to development of internal abscesses. There is little scientific evidence to support this belief.

When should antibiotics be used? In a herd situation, the severity of the disease outbreak can be greatly reduced if all exposed horses have their temperatures taken daily (better yet, twice daily), and antibiotic therapy initiated on any horse that develops a fever. Antibiotics should also be used on horses that are having trouble breathing because of abscesses causing airway obstruction, and on horses with pneumonia or evidence of bastard strangles.

Horses with evidence of 'bastard strangles' may require high levels of antibiotics for protracted periods, at least several weeks. Attempts to treat this complication are often unrewarding.

Prevention

Absolute prevention is not practical for most horse owner's unless they are prepared to never take their horses off their farm or bring in any new horses. Asymptomatic carriers, as well as the bacteria's ability to persist in the environment for prolonged periods, make it likely that your horse will eventually become exposed. The following guidelines will allow you to get out and enjoy your horses while also minimizing the risk of them contracting this disease.

- Vaccinate your horses. If you take your horse to competitions, or are sending your mares for breeding, then vaccinating them for strangles is the single most important step you can take to reduce the chances of them bringing strangles home. Foals that accompany mares to the breeders' should also be vaccinated. There are 2 different types of vaccines available. The older intra-muscular vaccines do not consistently prevent infection and are associated with a high incidence of side effects, including fevers, muscle stiffness, injection site abscesses, and purpura hemorrhagica. A new intra-nasal vaccine was recently introduced which avoids the side-effects of the intramuscular vaccines. A modified-live version of the bacteria is squirted up your horse's nostril, stimulating immunity in the airways. It is boosted in 2-3 weeks and then annually. While not 100% effective, this vaccine greatly reduces the chance of your horse getting sick and leads to faster recovery times if it does get sick.
- Strict quarantine is advised for all new arrivals on the premises and should occupy a period of at least 2 weeks, preferably a month.
- Avoid overcrowding and stress on your horses. Both these situations can weaken your horses immunity and increase the likelihood of them contracting diseases.
- If you have an outbreak of strangles on your farm, isolate all infected individuals. Disinfect all infected surfaces that can be cleaned, as well as any tack or utensils that have been exposed to infected individuals. Take temperatures twice daily of all exposed horses that are not yet showing signs and begin antibiotic therapy at the first sign of fever.

Other Facts

- 80% of affected horses stop shedding the bacteria within 1 month of recovery from the disease.
- Approximately 20% of affected horses will shed the bacteria for many months after they have recovered.
- Nonsymptomatic carriers - In a study in England, 193 horses that came down with strangles were studied. Of these horses, 23% shed the organism for more than 4 weeks, with a mean duration of 10 months!!! One horse was shedding for 47 months. Of these carriers, 79% were 10 years of age or older. In a follow up study, antibiotics were used to try and eliminate the carrier state. Treatment ranged from 1 to 4 weeks. 88% of these affected horses quit shedding by the end of the treatment.

In conclusion, strangles is a highly contagious disease. Because horses can shed the bacteria without showing clinical signs, you have no way of knowing if your horse has been exposed until it is too late. While typically not life-threatening, it requires a great deal of unpleasant nursing care. Once your premises are infected, it is very difficult to rid the bacteria and future outbreaks on your farm are likely. As with most things in life, an ounce of prevention is worth a pound of cure.