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STRANGLES

A. What is Strangles?

- Strangles is a contagious, bacterial disease of the horse caused by the bacteria *Streptococcus equi*.
- *S equi* enters the horse's system via the mouth or nose and invades the mucosa of the pharyngeal region and upper respiratory tract.
- *S equi* can also infect and be harbored in the guttural pouches.
- The name 'Strangles' originated because swelling of the lymph nodes under the jaw can cause the horse to have difficulty eating and breathing. 'Bastard Strangles' is characterized by internal abscesses, and can sometimes be very difficult to diagnose.
- The disease is extremely contagious, but not usually fatal in most horse populations.

B. What are the clinical signs of Strangles?

- Classic infection with *S equi* is characterized by fever, enlarged lymph nodes (especially under the jaw) which may abscess and drain thick nasal discharge, anorexia, and depression.
- Fever is the first sign; followed closely by enlargements of the lymph nodes in the head/neck.
- The most obvious and well-known clinical sign is abscess formation under the jaw; these abscesses will mature and eventually drain thick, yellowish/green pus
- **HOWEVER**, remember that a horse can be infected with *S equi* without visible abscesses!
- 'Bastard' strangles is characterized by internal abscesses; these horses are often off their feed, depressed, lethargic, febrile, etc.

C. How is Strangles transmitted?

- The most obvious source of transmission of *S equi* is nasal discharge and pus draining from submandibular abscesses of infected horses.
- The bacteria can be transmitted directly and indirectly. Direct transmission is via horse-to-horse contact. Indirect transmission is via sharing of water/feed buckets, tack, water sources, handlers, etc.
- Occasionally, apparently healthy horses can shed the bacteria in normal-appearing nasal secretions, thereby acting as a source of infection for the rest of the herd.

- Nasal shedding of the bacteria usually starts 1-2 days after development of fever, and can persist for 2-3 weeks beyond the resolution of clinical signs. Some horses become persistently infected, and may shed the bacteria intermittently for years.
- *S equi* can persist in the environment and act as a source of re-infection to susceptible animals.

D. How is Strangles diagnosed?

- Bacterial culture of nasal swabs, nasal washes or pus from draining abscesses is the gold standard for diagnosis of *S equi* infection.
- PCR testing is used to detect the DNA of *S equi* in swabs or washes from suspect horses nasal passages.
- PCR cannot distinguish between dead and live organisms. Thus, culture is used to confirm infection in PCR-positive cases.
- Serology (blood work) can be useful in working up cases of bastard Strangles

E. How is Strangles treated?

- The recommended treatment of Strangles is directed at encouraging maturation and drainage of abscesses. This can be accomplished via hot compresses, topical treatments (icthammol) and surgical drainage.
- Fever and pain can be managed with oral anti-inflammatory medication (bute, banamine).
- There is significant debate about use of antibiotics in the treatment of active Strangles infections. Once the abscesses have formed, antibiotic therapy may actually slow the maturation of the abscesses, ultimately slowing progression and resolution of disease.
- Antibiotics may be most useful very early in the disease process and/or in those horses that are severely affected (i.e. having trouble eating, drinking or breathing).
- Some severely affected horses require intensive care in a hospital setting.

F. Is there a Strangles vaccine?

- Currently, the recommended vaccine is an attenuated live vaccine that is administered intranasal to stimulate local immune response in the pharyngeal mucosa.
- An intramuscular vaccine is available, but not generally recommended due to high rate of complications (abscesses, sore necks).
- The intranasal vaccine should not be administered at the same time as other intramuscular vaccines, due to risk of abscessation at injection sites.
- The intranasal vaccine is given in an initial 2-dose series, 2-3 weeks apart, followed by annual booster.

- Vaccination should not be used during an outbreak except in those horses that have had no contact with infected or suspect horses.
- G. How can I keep my barn as safe as possible?
- Use common sense! Keep new arrivals isolated for 2-3 weeks before joining the herd. Keep resident horses away from those just visiting the farm.
 - Don't allow direct contact with unknown horses while at shows, events, trail rides, etc.
 - Minimize stress associated with excessive work, long trips, shows, etc.
 - Follow your veterinarian's recommendation for vaccination.
- H. What do I do if I suspect a case of Strangles in my barn?
- If you have any concerns about your horse, call your vet ASAP!
 - Maintain a log of twice-daily temperatures on horses that might be at risk.
 - Temperatures >101 with possible exposure to *S equi* infected horses should be isolated from the general population and tested as described above.
 - Isolate suspect horses ASAP. Disinfect or dispose of equipment, personnel, tack, brushes, etc. that have come into contact with these horses. Thereafter, be sure to use separate equipment for each horse and be sure handlers follow basic biosecurity protocols (disposable boots, gloves, coveralls, etc) after handling suspect cases
 - Limit movement and exercise of all horses and personnel on an affected farm.
 - Maintain quarantine measures until there is no further evidence of new, developing cases. At this time, gradually remove quarantine restrictions as recommended by your veterinarian.