March 2017

Severn Edge
EQUINE VETS

Strangles

Strangles is a common, highly contagious bacterial infection of the equine upper respiratory tract. Caused by the bacteria Streptococcus equi, it may be spread by direct (horse to horse transmission) or indirect (via water troughs, feed buckets, people) contact of infected droplets and/or pus between horses. The risk of a strangles outbreak increases with the number of horses on a particular property, the frequency of horse movement on/off a premises as well as factors such as overcrowding, nutritional, environmental and transport stress which all impact the immune system to a varying extent. Younger horses are more commonly and severely affected. Despite our increased recent knowledge behind the mechanisms underlying this disease, disease control for this condition remains difficult within the UK horse population.

Clinical signs

The bacteria gains access to the tonsils and lymph nodes of the horse's head where it multiplies and increases in numbers. The clinical signs typically associated with the disease are as follows:

- Depression
- Reluctance to eat (anorexia)
- Nasal discharge (typically thick, yellow and cloudy)
- A soft cough with/without difficulty breathing
- High temperature (fever >38.5C)
- Swollen lymph nodes in the throat region (which may develop into abscesses and rupture)

Infected horses may shed the bacteria before showing obvious clinical signs. Streptococcus equi can remain "dormant" in the upper respiratory tract of apparently unaffected horses with these individuals remaining a source of infection to other animals.

Most animals recover from strangles over a 4-6 week period.

More serious complications of strangles infection occur when the bacteria gain access to the horse's bloodstream and spread throughout the body potentially causing a number of serious problems in subsequent weeks-months following infection.

- Throat compression and difficulty breathing
- "Bastard Strangles" (the formation of abscesses throughout the body)
- Collection of pus within the guttural pouches
- Anaemia
- Immune mediated disease (where the body attacks itself)
- Silent carrier status (10 % of "recovered" horses)

Diagnosis

Recognising ill horses with throat swelling with or without abscessation should lead to quick confirmation of the diagnosis of strangles. Conformation of the presence of the bacteria Strep equi centres around bacterial culture and a diagnostic laboratory test known as "PCR". *The diagnostic accuracy of identifying the presence of Strep.equi is enhanced by performing both of these tests concurrently.*

Samples suitable for testing include swabs taken from the throat region of the horse (3 samples taken 5-7 days apart), pus from draining abscesses and material harvested from the horse's guttural pouches. Blood samples may also indicate exposure to the bacteria within the last 2 weeks – 6 months.

Severn Edge Equine,
The Bull Ring, Hollybush Rd
Bridgnorth, Shropshire
WV16 4AR

Tel: 01584 841 080
www.sevg/equine

Unfortunately no test is 100 % accurate in detecting Streptococcus equi which is part of the reason behind such poor control within the UK horse population. Ongoing research is being performed to address this. The main problem faced by veterinarians therefore is the identification of horses who silently "carry" the infection (within their guttural pouches), acting as a reservoir and unknowingly transmitting the bacteria to other, otherwise unaffected horses.

Treatment

Treatment is difficult and depends on individual circumstances in each outbreak. Controversy exists with regards to the best way to treat strangles.

Affected individuals should be isolated and treated with anti-inflammatories such a bute to improve their overall demeanour and appetite as well as reducing the associated fever. The availability of fresh water and palatable feed is important for affected individuals.

Topically applied hot packs may encourage abscesses to mature and rupture and may facilitate drainage by your veterinary surgeon. Rupture should be followed by daily flushing with dilute antiseptic solutions to promote healing.

The use of antibiotics is controversial within the veterinary world and will be managed on a case-by-case basis. Treatment of early cases may prevent the development of outward clinical disease however will prevent the horse from establishing a protective immune response. These animals remain susceptible to infection following cessation of therapy. If antibiotics are given too far into the disease process (on the development of abscesses), signs may recur if/when antibiotics are stopped. Antibiotics given on with established abscesses by preventing their maturation, ability to rupture and ultimate resolution.

Those animals who warrant antibiotic therapy include the following:

- Severe difficulty breathing due to respiratory compromise
- Prophylactic therapy for unaffected in-contact horses
- Individuals suffering from pus accumulation in their guttural pouches
- Cases of "bastard strangles"
- Thoroughly investigated strangle "carriers"
- Immune-mediated disease with confirmed bacterial infection

Horses affected by strangles as those in-contact animals should be immediately isolated in two groups. Affected animals will be treated as described above. In-contact animals should be monitored closely for signs of infection (monitor rectal temperature twice daily). Affected, in-contact and non-affected animals should each be managed in increasing order of risk with completely different equipment and clothing.

Freedom of infection is confirmed by the acquisition of three nasopharyngeal swabs obtained over 5-7 day intervals or a single guttural pouch lavage. These samples will be sent off for testing and if all are confirmed as "negative" for the presence of Strep.equi bacteria then the horse may be released from isolation. It is advisable to sample both affected and in-contact animals to rule out the presence of a potentially silent carrier.

Prevention and control

The bacteria Steptococcus equi may survive in the environment (warm, humid, dirty conditions) for a couple of weeks. However it is easily controlled by good hygiene. Paddocks holding infected horses should be left un-stocked for 1 month before use again.

Research suggests that 75% of affected cases develop immunity which will protect them from re-infection for a number of years.

Current recommendations revolve around the following actions:

- All horses entering premises should be monitored closely (rectal temperature twice daily for 2-3 weeks).
- High risk individuals may benefit from the submission of 3 nasal swabs and/or 1 guttoral pouch lavage for culture and/or PCR prior entry to the main herd to determine likelihood of being infected
- Any horse displaying a nasal discharge should be segregated and tested (swabbed) by a veterinary surgeon
- Swabs used to test horses should be long enough to sample the back of the throat
- Absolute diagnosis of strangles carriers requires sequential sampling (swabs/GP washes)
- All infected and in-contact animals should be segregated and strictly isolated
- No infected or in-contact animal should be removed from isolation until three negative swabs (taken at 5-7 day intervals) have been received
- Three negative swabs does NOT however guarantee freedom from infection
- No horse with clinical signs or recent contact with the disease should be exported.
- Good stable yard hygiene should be routine and paramount

Vaccination

There is a vaccination available which acts to reduce clinical signs experienced by the horse and likelihood of shedding the bacteria to other individuals. This vaccine is injected in the upper lip. It may be administered at regular intervals of 3-6months dependent on risk of infection.

Severn Edge
EQUINE VETS

Tel: 01584 841 080
www.sevg.co.uk/equine