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Animal Health Trust Fact Sheet

Strangles



The Disease

Strangles, caused by the bacterium *Streptococcus equi* (*S. equi*), is the most commonly diagnosed and important infectious disease of horses and ponies world-wide. It is one of the oldest known equine infectious diseases, first being recognised and reported in Roman times. The disease is characterised by a high temperature followed by profuse nasal discharge and abscesses in the lymph nodes of the head and neck. The swelling of these lymph nodes may, in severe cases, restrict the airway and it is this that gives the disease 'strangles' its name - it can literally strangle the horse.

Complications

Although most animals recover quickly and uneventfully, some horses become very ill for several days and a few (around 2%) may even die. Abscesses occasionally form in lymph nodes and body organs distant from the head and neck in a severe condition known as 'bastard strangles'. The infection may also trigger the disease purpura haemorrhagica, which is often fatal.

Around 10% of horses that recover from strangles become persistently infected with *S. equi*. These apparently healthy 'carriers' harbour *S. equi* in congealed bean-sized balls of dried pus called 'chondroids'. The diagnosis and treatment of carriers is critical to preventing future outbreaks.

Diagnosis of strangles and carriers

Diagnosis of strangles should be confirmed by collecting pus from abscessed lymph nodes, nasal discharges or throat swabs. A PCR test (involving DNA) is available at the Animal Health Trust, which is more sensitive and increases the chances of reliably identifying infected horses.

In addition, a new blood test has now been developed at the Animal Health Trust and validated through research funded by the Horse Trust. This blood test can be used to screen horses to identify those that have recently come into contact with *S. equi* and could be incubating the disease or carrying the infection. This is particularly useful to use before competition, movement or sales.

Animals carrying *S. equi* can be difficult to detect using the culture test and negative results from a single nasopharyngeal swab do not prove that an animal is not infected. However, three consecutive negative swabs over a 2 week period tested for culture and PCR will provide strong evidence that the infection has been eliminated.

The diagnosis of carriers can be confirmed by guttural pouch endoscopy where a small camera is passed into the guttural pouch. During this process chondroids can be physically removed from the guttural pouch and antibiotic gel instilled to kill off residual bacteria. Treatment of carriers in this way can be extremely effective and can prevent further outbreaks.

Below: Chondroids removed from one Shetland pony carrying strangles



Above: An AHT vet performs an endoscopy on a horse

Can strangles be treated with antibiotics?

Antibiotics are not always useful as they cannot penetrate the centre of an abscess where there is no blood supply. However, early treatment with antibiotics may be helpful if lymph nodes have not become enlarged. Each case should be assessed individually.

Is it possible to vaccinate against strangles?

There are currently no vaccines licensed for sale in Europe for the prevention of strangles. However, the Animal Health Trust is working to develop a vaccine for the disease.

Spread of infection between animals

Transmission of *S. equi* infections often requires fairly close contact between infected and susceptible animals. Mechanical transmission is common and care should be taken to ensure that horses which are not infected do not share the same tack as those with strangles, and that handlers change clothes and wash hands before moving between horses.



Above: Animal Health Trust scientist Andrew Waller continues strangles research

Strangles is frequently spread through shared water sources where the bacterium will live for long periods (over one month). Regular disinfection of water troughs and isolation of infected horses is strongly recommended. The ease with which the disease spreads through groups of animals is largely dependent on how an outbreak is managed.

The incubation period of strangles varies from 7 to 14 days. However, because infected horses can shed the bacterium for long periods, the interval between new cases in an outbreak can be far longer, up to 3 weeks or more.

It is important to recognise potential risks for the inadvertent introduction of strangles. In particular, it is recommended to not allow horses from different yards to share water at competitions, sales or events.

Control

Segregation of infected from uninfected animals on premises can be an effective and important means of control. If extreme care is taken, it may be possible to resume normal operations on uninfected parts of premises. In these circumstances, personnel and equipment used in infected areas should not be allowed into 'clean' areas.

Strangles is not notifiable by law. However, it is advisable to inform the relevant breeders' association if infection occurs.

The number of strangles outbreaks in the UK has increased in recent years and particular care must be taken to ensure that animals do not become infected and pass the infection on to other horses. Strangles is a very unpleasant and potentially fatal disease which causes a great deal of suffering. However, with care, outbreaks can be controlled and the worst effects avoided.



Above: Swabbing a donkey carrying strangles

Further advice can be obtained laboratory services or epidemiological advice from the Centre for Preventive Medicine, Animal Health Trust, Lanwades Park, Kentford, Newmarket, Suffolk CB8 7UU
Telephone: 01638 750 659

Anyone wishing to support our work in this area should send a cheque made payable to 'Animal Health Trust Strangles Research Fund'. Donations should be sent to the address below:

Animal Health Trust, Lanwades Park, Kentford, Newmarket,
Suffolk CB8 7UU