

JOINT INFECTIONS / SEPTIC ARTHRITIS

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How does it happen

Joint infections are a common cause of lameness in horses. Lameness is usually severe and if left untreated may be permanent. Extreme cases may require euthanasia on humane grounds.

The most common causes of joint infections are puncture wounds or lacerations of the limb over or near a joint or tendon sheath. Wounds may enter into the joint directly or cause significant tissue damage around the joint that ultimately results in joint infection (Figure 1). Joint injections may also cause joint infection however are less common. The least common cause of joint infection in adult horses is spread of bacteria via the bloodstream and lodging of the bacteria in the joint.



Figure 1: Pastern wound - this wound was later found to involve the tendon sheath and the coffin joint

It is therefore extremely important to be aware of wounds around joints or tendon sheaths. Ideally the horse should be checked by a veterinarian if it has a wound near a joint or a severe lameness associated with a wound or following a joint injection.

How do we know if the joint is infected?

The most common clinical signs that are associated with joint infection include severe lameness and swelling of the joint. Occasionally after a joint has been injected with steroids the lameness may get worse gradually and this may be a sign that early infection is present. However if the infection is due to a laceration and the joint is open to the air pressure will not build up and the lameness may not be as severe. In this case joint fluid may be seen to drain from the wound.

The best way to know if the joint is infected is to obtain a sample of fluid from the joint aka “joint tap” (Figure 2). The colour and consistency of normal joint fluid is clear to yellow and is usually “stringy”. If the joint is infected the fluid can remain a yellow colour however will often become cloudy and more watery. The joint fluid should then be sent to the laboratory for analysis for cells and growth of bacteria. An increase in the number of inflammatory cells is indicative of infection. Growth or “Culture” of bacteria of the fluid is recommended however bacteria are usually only grown in 50% of cases. If culture is successful it can be very helpful in guiding the choice of antibiotics that we use.



Figure 2: “Joint tap” of a coffin joint

Often xrays and ultrasound are also performed in order to rule out other problems associated with severe lameness such as fracture or tendon injury.

How do we treat infected joints?

The most important part of treatment is early recognition of the problem and immediate treatment.

Treatment is aimed at removing the bacteria and debris from the joint and this can be achieved by flushing the joint with sterile fluid. In the past this has been done by placing multiple needles in the joint and flushing a large volume of fluid through the joint. This

technique did not allow us to see debris in the joint. Now, however, we routinely flush joints with an arthroscope. The arthroscope allows visualisation of the joint and cartilage surfaces as well as foreign material which can be removed using instruments (Figures 3 & 4).



Figure 3: Arthroscopic lavage

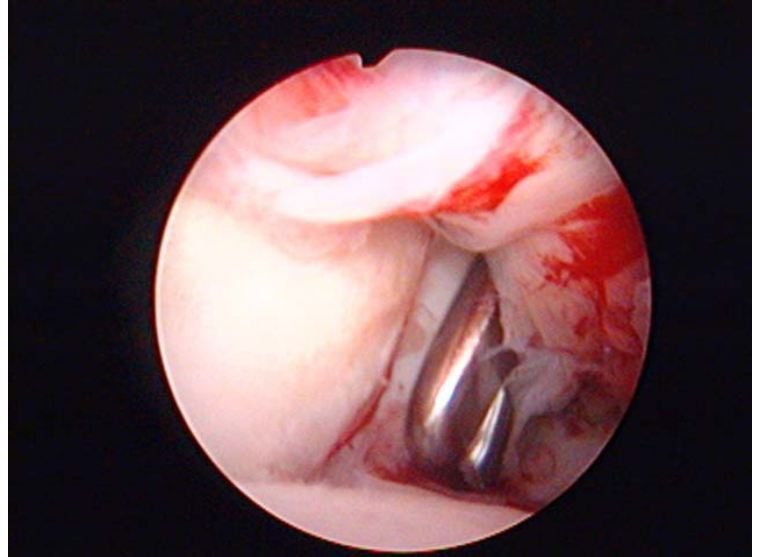


Figure 4: Picture of the joint during arthroscopy

Along with flushing the joint intravenous and intramuscular antibiotics are commonly used to help in removing the infection from the joint as soon as possible. These days we often use other techniques of local antibiotic administration as well to give very high levels of the drugs in the affected area.

After surgery the horses are monitored carefully for any increase in lameness and often the joints are “re-tapped” every couple of days to ensure the infection is resolving. Once the infection is under control the horse usually needs a further 4-6 weeks of further rest before recommencing gradual exercise.

Will he race again or return to previous work?

In general, if the infection is treated promptly and aggressively then the chances for survival and return to working soundness are good, however if the diagnosis and treatment is delayed it is thought that the chances for success are significantly lower.