



AN OWNER'S GUIDE TO JOINT INJECTIONS IN HORSES

Joint injections are frequently performed in horses. The three most common reasons for a vet to perform a joint injection are:

- To anaesthetise or “block” a joint during lameness evaluation
- To medicate a joint in the treatment of osteoarthritis
- To sample the fluid from a joint when there is a suspicion of infection.

Although the procedure is performed frequently, it is not without risks. The purpose of this fact sheet is to explain the process of joint injection and to discuss some of the potential risks.

Intra-Articular Injections

Regardless of the reasons for joint injection, the process of injecting a joint is essentially the same. The area of injection is clipped, if particularly fine coated may not clip, and scrubbed with an antiseptic wash until it reaches a surgical level of cleanliness. The area is then sprayed with surgical spirit. It is now ready for injection.

The chosen drugs or products are injected into the prepared joint using sterile needles and syringes whilst wearing sterile gloves.

Restraint depends on the site of injection and the nature of the horse. Well behaved horses might only require a twitch to ensure sufficient restraint, but some horse are more needle shy and will require sedation. Sedation is generally used unless doing a lameness work up.

Blocking Joints

Joint blocks using local anaesthetics have an important role during lameness examinations to confirm the association between a joint and signs of lameness. For example, 10-15 minutes after local anaesthetic is injected into a joint, the horse can be reassessed to determine if its lameness has changed. If the horse has improved and is more sound after blocking, then the anaesthetised joint is likely contributing to the lameness. Further diagnostics and/or treatment then can be undertaken.

Medicating Joints



The most common reason to medicate a joint is during the management of osteoarthritis and the most frequently used medications for this include: corticosteroids, hyaluronic acid, and polysulfated glycosaminoglycans (PSGAG). Although osteoarthritis has no cure, these drugs are all used to manage the condition by controlling the inflammation and improving the joint mobility. The decision of which product or combination of products are best will depend on the joint, the horse's function and timing before competition.

A less common reason for medicating joints is for the treatment of joint infection, during which antibiotics are injected directly into an infected joint, where they reach a high concentration and are able to effectively kill bacteria.

Sampling Joint Fluid

The most common reason to sample joint (or synovial) fluid is to determine whether there is infection within the joint. This can occur when a horse sustains a wound over a joint and is more frequent in the lower leg where the joints have no muscle coverage. By analysing the synovial fluid under the microscope it is possible to tell whether there are bacteria present and whether the number of white blood cells (from the body's defence) are increased or altered. Infection within a joint is very serious as without appropriate treatment it results in damage to the cartilage and arthritis. Therefore prompt sampling of the fluid is normally recommended.

Risks

Joint injections, although performed frequently without complications, are not completely risk free. It is beneficial to be aware of these risks when making decisions regarding treatments for your horse. The risks include:

Infection



Any time a needle is inserted into a joint there is the potential to introduce bacteria, which can lead to infection. With proper handling and technique, and thorough preparation of the limb, the risk of infection can be minimised, which is why all joints are thoroughly prepared prior to injection. Unfortunately, even with proper preparation, there is some risk of infection following a joint injection. Symptoms of infection include heat and swelling around the joint and in most cases lameness (which is often quite severe). As discussed previously joint infection results in cartilage damage and arthritis and as such needs to be stopped as soon as possible. Joint infections can be very difficult to treat, but respond best when treated early. So if your horse shows any of the above signs following injection, contact your vet immediately.

Adverse Reaction to the Chemicals

As with every drug we administer, there is a chance that the horse's immune system will respond inappropriately to it. The types of adverse reactions vary but when they happen in joints, they commonly result in similar signs to infection; with heat, swelling and lameness. This adverse reaction is referred to as a "flare" and unlike infection does not involve bacteria (is sterile). It is important to distinguish between joint infection and a flare (by sampling the synovial fluid) because treatment differs between the two. In most cases horses that have a synovial flare are treated with rest and pain killers, although severe cases might require lavage of the joint.

Joint Degeneration

Long term use of certain corticosteroids can result in cartilage breakdown. The amount and rate of degeneration depends on the joint, the amount of damage to start with and the individual horse. This has to be weighed up against the potential benefits of reducing the inflammation within the joint.

Laminitis

While corticosteroids are very useful in treating joint disease, it has been suggested that in certain instances these drugs can contribute to the onset of laminitis or founder. More recent research has failed to confirm this association, but in most cases it is advised that the lowest effective dose of corticosteroids is used. In animals with a history of previous laminitis or that are particularly obese, more care is generally taken (with lower, short acting doses) and animals with current laminitis generally won't be treated with corticosteroids.



Management after Injection

After intra-articular anaesthesia

Depending on the diagnosis most cases can be returned to normal management after 24 hours. Some cases will have a bandage applied after injection, which can also be removed after 24-36 hours and usually does not need to be replaced. We may request that for the initial period the animals are kept in a very clean stable.

After intra-articular medication

Management after injection varies with different joints and conditions. Whilst there are different opinions about the best management approach, a standard protocol would be: box rest for 24-48 hours, followed by a controlled ascending exercise programme, often starting with walking exercise then progressing to longer/more intense exercise over a period of weeks to months. Horses that have joints medicated with corticosteroids will often have 3 days complete rest followed by 3 days light work before returning to their normal training regime.

After sampling synovial fluid

Management depends on the findings from the sample. Septic joints require rapid treatment often with flushing (normally under general anaesthetic) and prolonged antibiotics. Non-septic joints are commonly managed in a similar fashion to those joints that had intra-articular anaesthesia.

Conclusion

It is important to be aware of the pros and cons of using intra-articular injections. While not for every horse and not without risk, joint injections can be incredibly useful in the diagnosis and treatment of joint diseases, which ultimately can prolong your horse's athletic career.