



Bone Spavin

Bone Spavin: arthritis in the lower hock joints

Typically this is a condition that we see more frequently in teenage horses, however it can be diagnosed in much younger animals. It is a very common cause of hindlimb lameness in all equines. The hock is made up of four joints in total; the tarsocrural joint, the proximal intertarsal joint, the distal intertarsal joint and the lowest joint, the tarsometatarsal joint. The two most commonly affected joints with bone spavin are the distal intertarsal and tarsometatarsal joints. Conditions of the upper tarsocrural joint tend to result in a condition called “bog spavin”.



Clinical Signs

The presenting signs, as with any cause of lameness, can vary greatly but include:

- Poor performance and stiffness
- Often the horse warms up out of the lameness
- Choppy, stilted gait
- Positive response to a flexion tests when assessed
- In more advanced cases a bony swelling may be seen or felt on the inside of the limb over the affected joints

Diagnosis

As with all lameness cases the presenting clinical signs may give an indication and the affected portion of the limb. However, this cannot be definitive and in order to get a conclusive diagnosis a full lameness examination and localisation of the lameness using local anaesthetic blocks is commonly performed.



In the case of hock arthritis the easiest joint to access for this procedure is the tarsometatarsal joint. Following infiltration of a small amount of local anaesthesia into the joint the lameness is often abolished or dramatically improved. (As this joint is located adjacent to the suspensory ligament interpretation of a successful result must be taken with care as the suspensory ligament can be desensitized at its origin).

Vets may use diagnostic imaging to view the structures within the region. In a horse that has improved to anaesthesia of the tarsometatarsal joint, radiography (x-ray) is the imaging of choice.

There are four standard x-ray views that are obtained. The changes that can be observed on radiographs consistent with osteoarthritis of the hock include bony spurs, narrowing of joint spaces, new bone formation, bone absorption and in some more advanced cases, fusion of the affected joint(s).



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Diagnosis continued

In those cases where diagnostic anaesthesia cannot be performed or in cases where the horse has improved to the regional anaesthesia but has no radiographic changes in the hock (or to the suspensory ligament on ultrasound), it may be prudent to perform nuclear scintigraphy (bone scan) examination. During scintigraphy, a radiographic isotope is injected into the horse following a period of exercise, and it highlights areas of increased bone turnover. Early onset bony changes are not highlighted on radiographs until there are 30% changes within the bone. In these cases scintigraphy is much more sensitive to these changes.

Treatment

Once bony changes have developed, there is nothing that can be done to reverse the damage. The main aim is to manage the pain and prevent further change. The use of long term non-steroidal anti-inflammatory drugs (for example Bute) is an option, however its use must be carefully considered as long-term use can compromise kidney and intestinal health. Additionally horses are not allowed to compete in many disciplines whilst on this type of medication. Steroid injections into the joint is a more targeted treatment. Typically, this treatment lasts up to 4-6 months (approx.) with some individual variation between horses and stage of disease. The steroid injection acts to reduce inflammation within the affected joint. This can be repeated multiple times throughout the horse's lifetime.



Fusion of the joints can help reduce the pain. The fusion of the joint can be achieved by injecting a caustic substance into the joint, which destroys the cartilage. Alternatively, the joint can be fused surgically by drilling the bones either side of the joint and in some cases filling the void with bone graft. Both of these procedures can initially make the horse lame for weeks or months and is therefore not undertaken lightly.

Bisphosphonates are a type of medication that can be used alongside an exercise programme to help improve the horse's athletic performance. The licensed medication for hock osteoarthritis is Tildren®. This is administered into the vein, not directly into the joint. The mode of action is to combat the abnormal bone remodelling changes that are seen within the joint.



Remedial farriery, can help to improve the mechanics of the limb and the horse's performance. The exercise regime for these horses is crucial. Daily exercise is vital to keep the joints moving, however overall you may need to reduce the athletic expectation of the horse.

In summary, there are many treatments available to horses affected with bone spavin, and it is important to work closely with your veterinary surgeon to select the treatment protocol that will work for you and your horse.