Fact Sheet

Bone Spavin

Bone Spavin in the equine hock joints

Bone spavin is the term used worldwide to describe osteoarthritis, or degenerative joint disease, in the lower hock joints in the horse. 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 upper tarsocrural joint, the proximal intertarsal joint, the distal intertarsal (or centrodistal) 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.

Generally poor performance and a stiffness are the most common early signs, often with the horse warming up out of the lameness. This can progress to a choppy, stilted gait as the horse begins to resent loading the limb.

At a veterinary examination the horse may have a positive response to a flexion test; where the leg is held in forced flexion for 45 seconds and as the horse trots away the lameness observed is worse than the original lameness.

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 must be performed. Following the lameness assessment, localisation of the lameness using local anaesthetic blocks is commonly used. Local anesthesia is instilled into strategic portions of the limb until the lameness significantly improves. 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 also be desensitised by blocking the joint.)

Once a veterinary surgeon has localised the area of pain in the horse, they 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, these allow us to best view the 3D structure of the hock on the 2D screen of the x-ray machine. The changes that can be observed on radiographs that are 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).

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 maybe 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. Therefore, our main aim is to manage the pain and prevent future changes.

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 lamer for weeks or months and is therefore not undertaken lightly.

Bisophosphonates is a type of medication that can be used alongisde 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, such as a rolled toe, can help to improve the mechanics of the limb, helping the breakover and overall helping to improve 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.

For further information, please contact your local VetPartners Equine Veterinary Practice on:

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