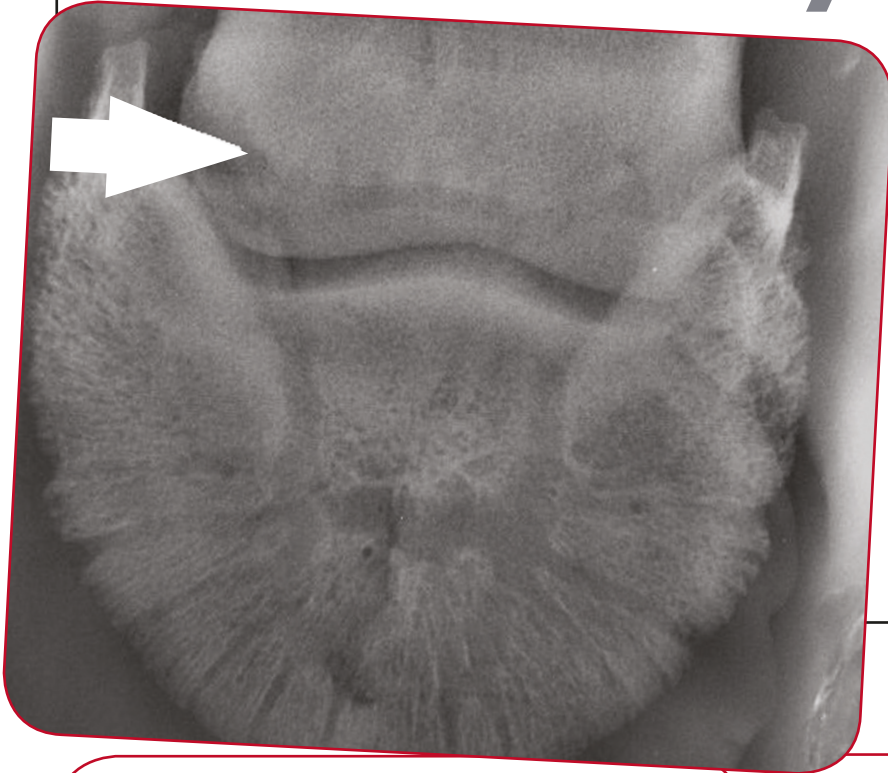
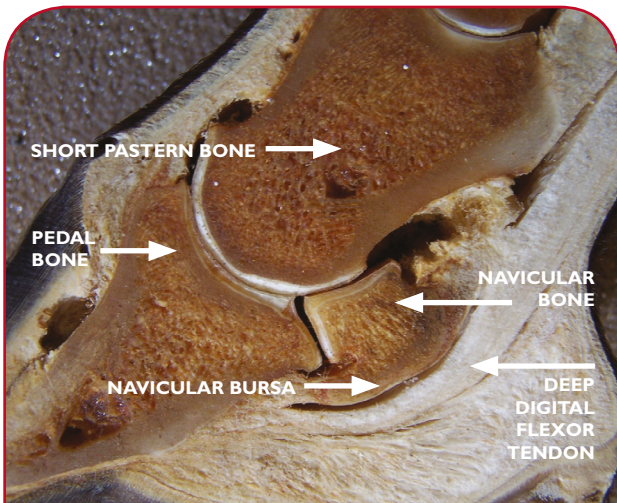


Navicular Syndrome



Navicular syndrome describes a condition where pain arises from the navicular bone in the foot and the surrounding soft tissue structures. It is a common cause of forelimb lameness in horses. Poor foot conformation (especially long toes and low heels) predisposes the horse to developing navicular syndrome as extra biomechanical strain is placed on the heel area.

Anatomy



A CROSS SECTION OF THE FOOT SHOWING THE ANATOMY OF THE AREA

The navicular bone sits roughly in the centre of the hoof, behind the pedal (coffin) bone. It is held in place by several small ligaments. The purpose of the navicular bone is to help the large deep digital flexor tendon to run smoothly down the back of the foot onto the pedal bone. A small sac of fluid (the navicular bursa) sits in between the navicular bone and the tendon. Any of these structures can be damaged in navicular syndrome.

Clinical Signs

Navicular syndrome can cause lameness which may range in degree from mild to severe. This is usually most obvious when the horse is trotted on a circle on firm ground. The severity of lameness present will depend on which structures are injured and how severe the damage. Usually both front feet are affected but one foot may be worse than the other. Any age of horse can be affected. The disease is usually chronic (develops over a number of months/years) but acute (sudden) injuries can occur in some cases. It is rare in the hind feet and in ponies. Some horses with mild navicular disease will be sound.

KEY POINTS

- Navicular syndrome involves the navicular bone and surrounding soft tissue structures.
- The disease is usually present long-term and in both front feet.
- The degree of lameness varies from horse to horse.
- Good corrective farriery is the key to successful management.

Diagnosis

Your vet may suspect navicular syndrome to be present on the basis of a clinical examination but other tests are usually needed to confirm the diagnosis.

- Nerve blocks: local anesthetic is used to numb the heel area or the navicular bursa – a temporary improvement in lameness will result.
- X-rays: radiographs are taken from several angles to look at the navicular bone.
- Ultrasound scan: can occasionally be useful but the hoof wall makes scanning this area difficult.
- Bone scan: nuclear scintigraphy is occasionally used to aid diagnosis but is not usually needed.
- MRI scan: gives the most accurate image of the internal soft tissues of the foot and may be necessary for a definitive diagnosis.



A NERVE BLOCK OF THE HEEL AREA CAN ASSIST WITH THE DIAGNOSIS

Treatment

Navicular syndrome is rarely completely cured but many cases can be managed well enough for the horse to regain soundness. Unfortunately, some horses do remain lame and need to reduce their work level or retire completely.

Corrective farriery

The most important aspect of treatment is corrective farriery to reduce the pressure on the heel area. The type of trimming or shoeing required will depend on individual foot conformation. Good foot balance is essential and your farrier may want to see your horse walking to assess this better. The toe length is usually reduced to help 'breakover' (the point in the stride when the heel leaves the ground and the foot rotates over the toe). Some cases may be managed without shoes but most cases will benefit from shoeing to provide heel support. This may be achieved with natural balance-type or heartbar shoes. Your vet and farrier can work closely together to achieve the best possible result.

Other treatment options include:

- intravenous drip of bisphosphonate (tiludronate), a drug used to reduce bone weakening;
- anti-inflammatory medication in feed;
- injection of anti-inflammatory medication into the navicular bursa;
- extracorporeal shock wave therapy to reduce pain and inflammation;
- surgery to remove a section of the nerve which provides sensation to the heel area.



CORRECTIVE TRIMMING AND SHOEING IS IMPORTANT IN THE MANAGEMENT. HEART BAR SHOES MAY BENEFIT SOME CASES.



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