FOX VALLEY EQUINE PRACTICE

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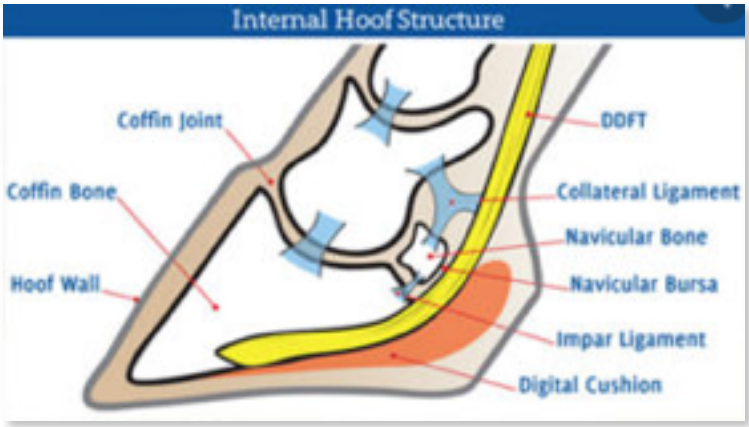
Navicular Syndrome

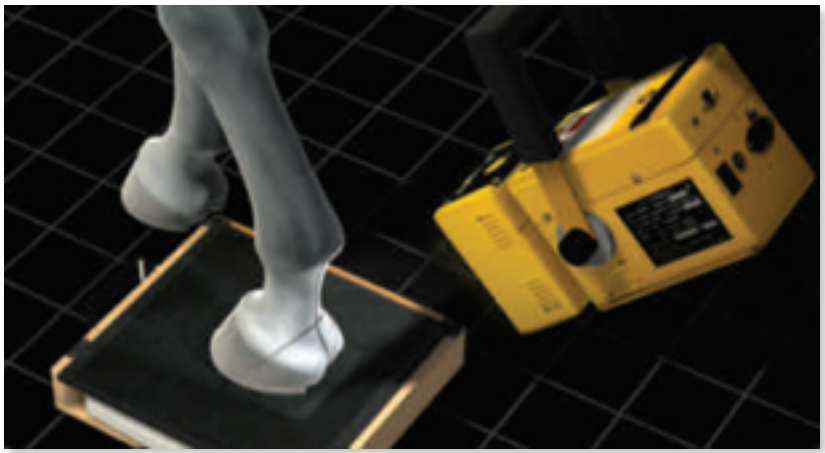
Definition

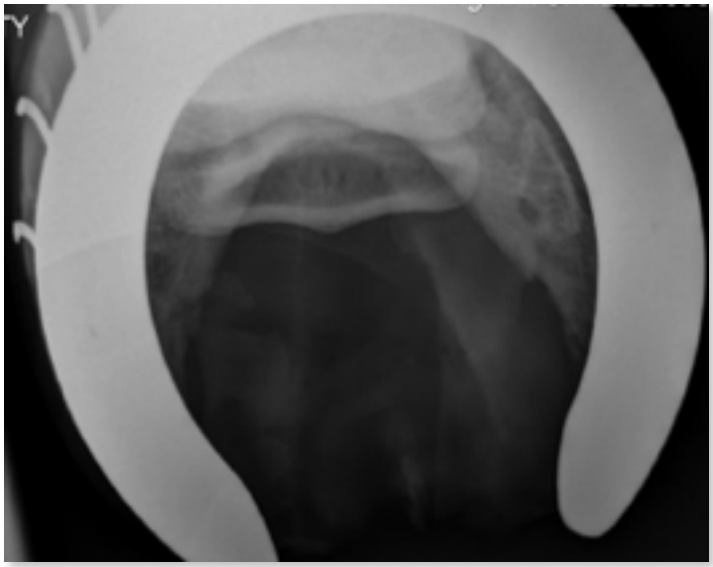
Navicular syndrome is a chronic forelimb lameness resulting from inflammation and degeneration of the navicular apparatus. This comprises the navicular bone, navicular bursa, deep digital flexor tendon (DDFT), and navicular ligaments. Navicular syndrome is a common diagnosis of chronic forelimb lamenesses and is often bilateral in nature (affecting both forelimbs). This syndrome is more commonly seen in horses between the ages of 8 to 10 years old as well as in Warmbloods, Quarter horses, and Thoroughbreds. Along with a genetic predisposition, conformation can contribute to the development of this syndrome. A broken back hoof pastern axis, or long toe and low heel, creates concussion of the navicular bone between the DDFT and phalanges resulting in navicular bone remodeling and associated navicular bursitis. This can be quite painful for affected horses.



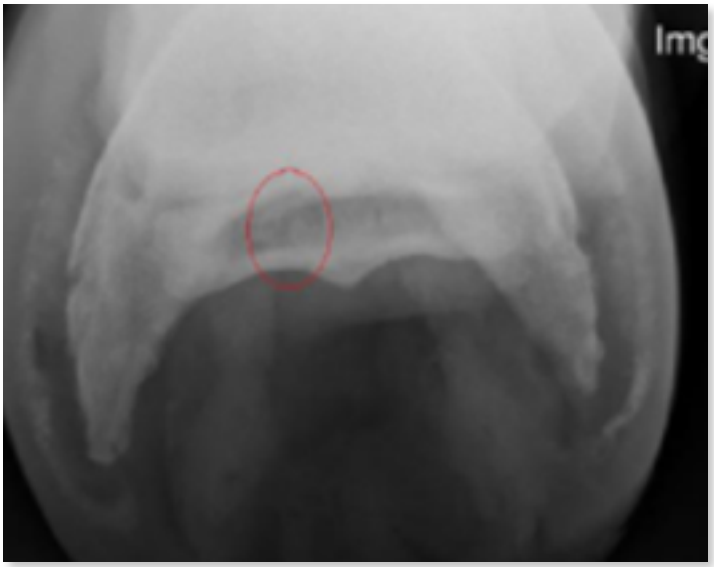
Diagnosis

The diagnosis of navicular syndrome is primarily clinical. Upon lameness exam, the forelimb lameness tends to be exacerbated on hard ground and on the inside limb when circling. Due to the bilateral nature of the syndrome, a short choppy gait is often exhibited. Hoof testers are commonly positive when applied across the heels of the foot. To help localize the forelimb lameness, a palmar digital nerve block of the lame forelimb is typically performed. This block numbs the caudal 2/3 of the foot. In horses with navicular syndrome, this block will improve the lameness in that limb and often result in the lameness appearing to “switch” to the other forelimb. A navicular series of radiographs of the foot are typically the next step in supporting the diagnosis. These images are likely to show remodeling of the navicular bone.





Normal navicular bone



Abnormal navicular bone: loss of distinction between the outer border (cortex) and inner bone (medulla). Enlarged vascular channel (red circle).

Treatment

Treatment of navicular syndrome involves therapeutic shoeing with the primary goal of unloading the heel. This includes changes such as shortening breakover (shortening the toe) and raising the heel. A wide-webbed shoe with a rocker toe is one means of accomplishing this, however many farriers have different shoeing methods of achieving this same therapeutic goal. Rest as well as anti-inflammatories such as Bute or Equioxx are also combined with shoeing changes. Intra-articular injection of steroids and hyaluronic acid into the distal interphalangeal (coffin) joint or navicular bursa are also performed on some cases to help decrease inflammation and provide pain relief.

Other adjunctive therapies include administration bisphosphonates such as “OsPhos.” Bones within the body are constantly remodeling with bone resorption and new bone formation taking place at the same time in a coordinated fashion. During bone stress or disease, such as navicular syndrome, bone resorption is accelerated and exceeds new bone formation. Bisphosphonates work by inhibiting bone resorption and restoring normal bone homeostasis. OsPhos is an IM injection that can be given on the farm.

A palmar digital neurectomy is a last resort treatment option for refractory cases. This procedure transects the nerves supplying the caudal foot providing immediate pain relief to the horse. There are many things to consider before performing this surgery, and not all horses with navicular syndrome are candidates.

Prognosis

Although navicular syndrome cannot be cured, it can be managed. A combination of rest, anti-inflammatories, and corrective shoeing may be all some horses require to stay comfortable. Others may benefit from the addition of other therapeutics as described earlier. Many horses are able to continue working or even go on to have successful show careers. Some horses may respond well for years but become more refractory to treatment over time. The best course of action is to work closely with your veterinarian and farrier to come up with the best treatment plan for your horse.