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NEBRASKA EQUINE VETERINARY CLINIC

The story of Zeus, a 10 year old quarter horse that was fine in the morning and in extreme pain in the afternoon started with a call from the trainer. A possible fracture makes us scramble to get a doctor and x-ray equipment to the horse in pain ASAP. He was standing with his left front limb toe-touching only; he had swelling around the lower part of the limb and a strong digital pulse. This was an urgent matter. The doctor arrived, examined the limb and foot, heard the clink of metal in the foot with the hoof pick and took some radiographs. This confirmed what was then suspected. Zeus had stepped on a nail. Just as serious as a fracture, depending on where the nail penetrates the foot, it can be a life-threatening injury. Fortunately for Zeus, the nail missed the vital structures in the foot and he was treated accordingly and is currently sound!



Nails, screws and other sharp objects in the soil are able to be found in nearly every environment. Previous construction or repair projects are the likely source of these objects. We should pick up all of them that we see and use a magnet to find those we cannot. Erosion, spring rains and the winter freeze and thaw cycles can cause previously hidden objects to work their way up into the top soil again. We need to be aware of the danger these objects pose to our horses.

The sole of a horse's foot is usually very hard and provides good protection against punctures. However, the frog and heel bulb areas are soft and are at a great risk for penetrating wounds. Horses that have a puncture to the foot will be suddenly very lame and are often not willing to bear weight on the affected foot. As a horse owner, you should carefully inspect the foot with a hoof pick, your eyes and hands. If a foreign body is found in the foot, you should resist the temptation to remove it. Since the horse is usually unwilling to stand on the foot, they will not usually push the nail/screw farther into the foot. However, a towel can be used to provide protection to the foot while decreasing the risk of pushing it further into the foot. The towel should be used to provide a thick cushion to the entire foot except where the nail is. This location should be left open and should

resemble a doughnut. This will provide a recess for the nail. Your veterinarian should be called immediately to provide emergency care.

When your veterinarian arrives, they will examine the foot closely. This may require sedating the horse and using local anesthetic to desensitize the foot. Radiographs can be obtained to examine the depth and orientation of penetration of the foreign body. This is crucial to determine the potential structures involved. Potential complications include infection of the navicular bursa, coffin joint, digital cushion and digital tendon sheath. The coffin bone and deep digital tendon can also be involved in these wounds.

Treatment should include a tetanus toxoid, broad spectrum antibiotics and anti-inflammatory medication. Debriding and thoroughly cleaning the puncture wound followed by bandaging the foot is essential. Further diagnostics used in a hospital setting to determine if the navicular bursa, coffin joint or tendon sheath are involved include placing a needle into these structures to obtain synovial fluid for analysis, followed by injecting contrast media and taking a radiograph a few minutes later to identify if the contrast exits the puncture wound. An advanced diagnostic, Magnetic Resonance Imaging (MRI), can be used at some referral hospitals.

All puncture wounds to the foot should be seen as emergencies. Affected horses can have a guarded prognosis depending on which structure or structures are affected.