

Lacerations Involving Joints

Nathan Voris, DVM

Anyone who has owned a horse knows the term “horse-safe” is an oxymoron; many horses could find a way to hurt themselves in a barn with padded stalls. In equine practice, lacerations represent one of the most frequent emergency calls. Most of the time, the wound is in a benign area that can be easily cleaned up and sutured. Other times, location of the wound combined with critical structure involvement forbids simple primary closure and calls for aggressive medical and possible surgical intervention to facilitate healing.

There are very few wounds that are as threatening to a horse’s career, or even life, than one that involves a joint. The reason for this is the anatomic and physiologic makeup of the joint itself. Beneath the skin, the joint is protected by a fibrous tissue structure called the joint capsule. On the inner side of the joint capsule is a tissue layer that produces synovial fluid. The synovial fluid is responsible for lubricating and nourishing the joint surfaces. Unfortunately, the properties that allow synovial fluid to nourish the joint also make it a perfect medium for bacterial growth if the protective layers are penetrated.

The body’s natural response to a wound is to send scavenging white blood cells to “clean up” damaged tissue and bacteria. This is the reason a joint may become swollen, hot and painful following an injury. Unfortunately, the body’s response to injury is almost as bad as the infection itself because the flood of white blood cells into a joint can lead to cartilage breakdown. The longer the infection lasts, the more likely there will be significant permanent damage to the joint.

Lacerations near joints warrant immediate thorough evaluation by a veterinarian to assess the extent of tissue involvement. If the injury is recent and there is minimal subcutaneous inflammation (cellulitis) a needle should be inserted into the joint, on the side opposite the wound, and sterile saline should be injected to distend the joint. If saline from within the joint leaks out through the wound, the joint should be considered infected and aggressive treatment should be initiated.

Appropriate treatment involves intra-articular irrigation, broad spectrum systemic and intra-articular antibiotics, systemic anti-inflammatories, and sterile bandaging. Most of the time, the wound should not be closed with sutures due to the risk of sealing bacteria into the joint or surrounding tissues. Duration of treatment is solely dependant upon the horse’s response to treatment. If appropriate treatment is initiated within 24 hours of injury, horses have an 85% chance of survival and 50% chance of returning to full function.

Sometimes a cut that appears to be “a long way from the heart” can be a big problem but rapid identification of joint involvement and aggressive medical and surgical care can tip the odds in your favor for a positive outcome.

