



EQUINE REPRODUCTION SVC

*** CLICK HERE ***

Current Articles &
Research

Reproduction
Foal Disorders
Lameness

Check back often for
new additions

Tips for Managing Lacerations Involving Joint Structures

Horses can find trouble in even the best of housing conditions. One of the more dreaded injuries is one that involves synovial structures—joints or tendon sheaths. While the best-case scenario would be preventing these wounds in the first place, sometimes they inevitably happen.

At the 2015 American Association of Equine Practitioners Convention, held Dec. 5-9 in Las Vegas P.O. Eric Mueller, DVM, PhD, Dipl. ACVS, of the University of Georgia's College of Veterinary Medicine, and Kevin Claunch, DVM, Dipl. ACVS, of Weems and Stephens Equine Hospital, in Texas, led a table topic discussion on how to handle lacerations involving synovial structures. Following are some of the questions attending veterinarians asked.

Q: What is best approach to wire injuries?

These are frustrating wounds, especially if the wire has formed a tourniquet around the limb. Usually there is delayed necrosis (tissue death): "Trouble is coming; wait for it," Claunch warned, adding that there is no way to reliably prevent worsening of the injury due to loss of blood circulation and friction from the wire.

Key to resolution is getting to the wound early and treating aggressively with repeated debridement (removal of dead and damaged tissue). Radiographs (X rays) might also help the veterinarian identify a buried piece of wire or a bony injury, both of which complicate the injury and the healing process.

Q: What do we do about cellulitis (inflammation of subcutaneous connective tissue) around a joint, with no certainty that the joint was invaded?

Ultrasound is a noninvasive way to potentially reveal the extent of an injury, the group agreed. If the leg is "stovepipe" swollen, then sweat it down to a smaller, more localized size, administer systemic antibiotics, and then tap the joint.

If the horse has a puncture wound, place a probe into the opening and take radiographs to help outline the depth of the wound. It's also helpful to infuse sterile fluid into the wound to see where it goes.

Often a wound involves the tendon sheath rather than the joint, so the veterinarian should closely evaluate all synovial structures for damage.

Q: Do you flush as a diagnostic tool and as treatment?

Mueller said it's helpful to flush an acutely contaminated synovial structure with 1-2 liters of sterile saline or PlasmaLyte and antiseptics in the standing horse. The veterinarian might perform more thorough flushing under anesthesia.

It's important to administer systemic antimicrobials immediately, the panel said. Regional or intraosseous limb perfusion (delivery to the limb intravenously or to the bone marrow itself, respectively) can help increase antibiotic concentrations within the local wound area.

Once a wound becomes infected, you are already "way behind," so dive in and start with aggressive treatment early. For a wound that is not fresh, culture a sample prior to treatment so you know which antibiotics are likely to be effective.

Ultimately, an owner's financial limitations dictate what and how much can be done. Lack of serious improvement within 24 hours of treatment does not bode well for resolution.

Q: How do you measure progress?

Sometimes adhesions (scar tissue) within the tendon sheath that formed during healing will stretch or tear, causing pain and lameness. Controlled exercise, such as hand-walking, can help improve range-of-motion and limit the degree of adhesion development.

In some cases veterinarians inject anti-adhesion compounds along with corticosteroids to minimize inflammation and reduce the amount of scar tissue that develops with healing.

You should see the wound respond to appropriate therapy with improvements over one to three days once the correct treatment is implemented.

Historically, 81% of horses with septic (infected) joints survive; treatment success depends on which bacteria are involved and for how long. Radiographs are important for evaluating the affected joint's condition.

Owners should be aware that they are likely going to spend \$3,000-4,000 within the first three days on diagnostics, antibiotics, and surgery. Even then, you might only have a 50-50 chance of the horse surviving. "The less the horse has to do for a job, the better the prognosis," said Mueller.

It is not uncommon for septic inflammation to lead to arthritis. But it's best to wait at least six to eight weeks after wound resolution before implementing intra-articular joint therapy, said Mueller and Claunch because latent bacteria might still be present. Systemic joint therapy (such as intravenous hyaluronic acid, intramuscular polysulfated glycosaminoglycan, and/or oral non-steroidal anti-inflammatory drugs) is the best choice in the interim.

Because of the joint capsule's huge nerve supply, fibrosis of this area might cause a horse to remain sore despite wound resolution.

Take-Home Message

If a wound involves a synovial structure, work with your veterinarian to pursue immediate and aggressive therapy. These wounds require rapid and aggressive intervention with appropriate diagnostics, intravenous antimicrobials, lavage of the affected structure, and possible arthroscopic surgery. These strategies improve a horse's chances of a favorable outcome. However, resolution is a lengthy process that requires patience and a substantial financial commitment.