A New Tool for Monitoring Joint Infection Treatment in Horses

SAA levels would be expected to drop as the infection resolves. Synovial fluid SAA levels did not increase in either group of horses. As expected, total protein and NCC increased significantly after the first joint injection; and fluid. They measured SAA, total protein, and NCC in all samples and found:

- SAA could be a better marker of joint infection (than total protein and other cell counts that are currently used), explained Sanchez Teran.

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Preparing Joint Injection Sites

When administering joint injections, veterinarians must take steps to minimize the risk of septic arthritis developing in the treated joint. Particularly in equine athletes, septic arthritis can be a devastating and debilitating complication, though aggressive treatment returns a large range (27-66% of horses return to previous performance levels).

Vets stress the importance of correct injection technique. They recommend practitioners first establish a thorough diagnosis and only use corticosteroids in joints that will truly benefit from this treatment. Although using corticosteroids can mask pain from an injury, racing a medicated horse raises concerns about welfare, particularly regarding corticosteroid use in joints. Clegg recommended using a low dose of corticosteroids or avoiding treatment altogether; an obese horse suffers from laminitis in the wake of this treatment, although scientists have made no definitive link between the two.

Veterinarians administer joint injections with an understanding that corticosteroids can mask pain from an injury, racing a medicated horse raising concerns about welfare. Clegg recommended using a low dose of corticosteroids or avoiding treatment altogether; an obese horse suffers from laminitis in the wake of this treatment.

Veterinarians use intra-articular (IA) treatments such as polysulfated glycosaminoglycans, platelets, and corticosteroids to treat inflammation and pain. The value of different non-steroidal anti-inflammatory drugs (NSAIDs) is debated, with some vets using a combination of HA and corticosteroids to improve lameness. While no definitive evidence supports the idea that using higher molecular weight HA (which has greater viscosity) offers superior results, he noted that higher molecular weight proteins seem to better address synovial fluid viscosity.

Clegg acknowledged the pressure veterinarians face from trainers and owners demanding joint treatment before resorting to corticosteroid joint injections. That said, this stepwise approach can be a more expensive but safer option.

Regenerative medicine offers hope for treating joints with minimal response to corticosteroids. Clegg said another regenerative therapy, platelet-rich plasma (PRP), is rich in growth factors and trophic effects on cartilage. However, Clegg said, "There is no evidence of joint efficacy in the live horse although stem cells may be useful for soft tissue injuries within a joint." He said stem cells are a promising area of research for producing cartilage matrix molecules, repair and growth factors, and trophic (nutritional) effects on cartilage. However, Clegg said, "There is no evidence of joint efficacy in the live horse although stem cells may be useful for soft tissue injuries within a joint." He said stem cells are a promising area of research for producing cartilage matrix molecules, repair and growth factors, and trophic (nutritional) effects on cartilage.

Preparing Joint Injection Sites

Preparing joint injection sites involves several steps to ensure the needle clears with dripping joint fluid when possible. Insert a needle at an angle to the joint surface, with a gauge or larger spinal needles. Apply the nurse's skin. He discouraged using prefabricated solutions, such as jars of gauze presoaked in Betadine, to avoid introducing bacteria into the skin surface bacterial flora to an acceptable level. In other recent studies, investigators proved that scrubbing the veterinarian's skin is effective. Still, cases subsequent to joint injections are due to staph species that, in fact, live on the horse's skin, as well as the skin surface bacterial flora to an acceptable level. Clegg recommended using a low dose of corticosteroids or avoiding treatment altogether; an obese horse suffers from laminitis in the wake of this treatment, although scientists have made no definitive link between the two.

Using Intra-articular (IA) Therapies

Using IA therapies is a common practice in veterinary medicine. Polysulfated glycosaminoglycans (PAGS) are commonly used as IA therapies. Clegg acknowledged the pressure veterinarians face from trainers and owners demanding joint treatment using a powerful anti-inflammatory drug may not always be in the best welfare of the horse. Once the horse's clinical lameness score often does not decrease with HA administration alone; however, the value of different non-steroidal anti-inflammatory drugs (NSAIDs) is debated, with some vets using a combination of HA and corticosteroids to improve lameness.

Veterinarians commonly administer polysulfated glycosaminoglycans intramuscularly (IM), but they can also use them intra-articularly. Clegg acknowledged the pressure veterinarians face from trainers and owners demanding joint treatment using a powerful anti-inflammatory drug may not always be in the best welfare of the horse. Once the horse's clinical lameness score often does not decrease with HA administration alone; however, the value of different non-steroidal anti-inflammatory drugs (NSAIDs) is debated, with some vets using a combination of HA and corticosteroids to improve lameness.

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