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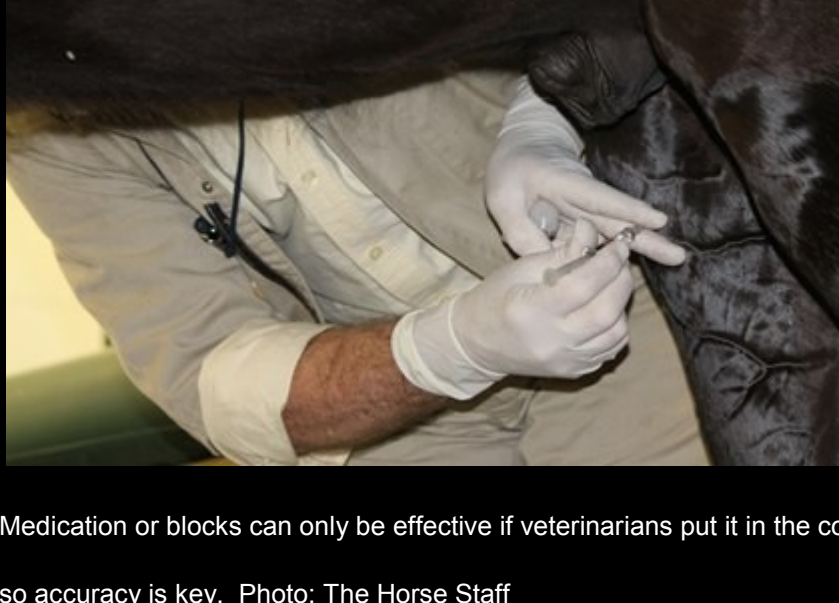
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The Challenges of Administering Joint Injections



Medication or blocks can only be effective if veterinarians put it in the correct place,

so accuracy is key. Photo: The Horse Staff

Injecting medication into a horse's joint is something akin to hitting the bullseye with a dart. Accuracy is crucial for both endeavors, but with an injection more than a game is on the line. Miss the joint, and the nerve block for lameness diagnosis might be ineffective, or the medication might not reach the intended spot in the horse that needs it.

Kathryn Seabaugh, DVM, MS, Dipl. ACVS, ACVSMR, and colleagues recently conducted a study on practitioners' accuracy when injecting lower hock joints, and she presented the results at the 2015 American Association of Equine Practitioners' Convention, held Dec. 5-9 in Las Vegas. Seabaugh is an assistant professor of equine lameness and sports medicine at the University of Georgia College of Veterinary Medicine, in Athens.

"Intra-articular diagnostic anesthesia and/or therapeutic injection are relied upon to help diagnose and/or treat osteoarthritis in the lower hock joints," Seabaugh said. But the medication can only be effective if veterinarians are accurate, and the distal hock joints can be a very challenging area to inject, especially if the horse already has osteoarthritis present, she added.

To determine their accuracy, Seabaugh and colleagues evaluated a group of six equine surgeons and surgery residents. Each veterinarian injected two distal intertarsal (DIT) joints and two tarsometatarsal (TMT) joints—both located in the lower hock—with a contrast medium. Then, the team took radiographs to determine where the contrast medium was located within the desired joint.

Seabaugh and colleagues determined that:

- They successfully injected 23 of 24 TMT joints, for a success rate of 96%;
- They were less successful at injecting DIT joints, however, hitting the target in just 10 of 24 joints for a success rate of 42%;
- Years of experience did not appear to significantly impact injection accuracy.

"The TMT joint was injected successfully nearly 100% of the time, whereas the DIT joint was frequently missed with contrast medium being placed outside the joint," Seabaugh said. The anatomical landmarks for the DIT joint can vary from horse to horse, which contributes to the challenge, she added.

As a result, she recommended veterinarians use radiographs to ensure proper needle placement before injecting the DIT joint. "Radiographs might not be required for every injection but they could help improve injection confidence and improve technique," she said, noting they can be very helpful when injecting horses with osteoarthritis, or OA.

"Horses with OA often have narrowed joint spaces or proliferative bone (i.e., bone spurs) making getting the needle into these joints even more challenging," Seabaugh explained. "We also often rely on 'ease of injection'—meaning the solution flows easily—as confirmation that we are in the right spot. But in horses with OA or narrowed joint spaces there may be a lot of resistance during the injection even if we are in the right spot."