MRI Findings in Horses With Lameness Localized to the Metacarpo(tarso)phalangeal Region Without a Radiographic Diagnosis

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Magnetic resonance imaging (MRI) is frequently necessary to accurately diagnose injuries in the fetlock region when radiographs fail to yield a diagnosis. Authors’ addresses: Department of Veterinary Clinical Sciences, Washington State University, 100 Ott, Pullman, WA 99164 (King, Schneider, and Roberts); Department of Clinical Sciences, Mississippi State University, 240 Wise Center Drive, Mississippi State, MS 39762 (Sampson); and Oakridge Equine Hospital, 6675 East Waterloo Road, Edmond, OK 73034 (Zubrod); e-mail: jking_dvm@hotmail.com. *Corresponding author. © 2011 AAEP.

1. Introduction
The bones and soft tissues of the fetlock region are commonly injured in equine athletes. Magnetic resonance imaging (MRI) has proven to be a valuable diagnostic tool in diagnosing subchondral bone damage, osteochondral defects, and ligament injuries that are not seen with other imaging modalities.1–4

2. Materials and Methods
MRI findings and clinical features from 244 horses with lameness localized to the fetlock region and without a radiographic diagnosis were recorded. Lameness was localized using diagnostic local anesthesia or clinical signs. All horses were examined and imaged because of lameness.

3. Results
Oblique distal sesamoidean ligament injury was the most common abnormality diagnosed (31%) followed by injuries of the bone and cartilage (23%), straight distal sesamoidean ligament (SDSL; 21%), suspensory ligament branch (8%), collateral ligament (7%), intersesamoidean ligament (3%), superficial digital flexor tendon (2%), and deep digital flexor tendon (DDFT; 1%). Fractures (1%) and palmar/plantar annular ligament injury (3%) were diagnosed less frequently. Bone and cartilage injury was less common in Warmbloods, and SDSL injury was more common in Warmbloods compared with Quarter Horses and Thoroughbreds. SDSL injury was most commonly diagnosed in dressage horses compared with horses used in other disciplines (hunter-jumper, Western performance, and racing). Fractional...
tures and bone and cartilage injuries were more commonly observed in Thoroughbreds compared with Quarter Horses and Warmbloods. Thoroughbred racehorses had the highest incidence of fractures diagnosed on MRI compared with horses used in other disciplines. DDFT injury was seen more commonly in Quarter Horses.

4. Discussion

The wide variety of abnormalities observed points out the value of MRI for making an accurate diagnosis in performance horses with lameness in the fetlock region. Soft-tissue injuries were found more frequently than bone and cartilage injuries, although many horses had a similar clinical presentation. An accurate diagnosis allows an appropriate treatment plan to be instituted.

References


