Magnetic Resonance and Radiographic Diagnosis of Osseous Resorption of the Flexor Surface of the Distal Phalanx in the Horse

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Osseous resorption at the attachment of the distal sesamoidean impar ligament and deep digital flexor tendon on the distal phalanx can be observed radiographically. Authors’ address: School of Veterinary Medicine, University of California, Davis, One Shields Avenue, Davis, CA 95616; e-mail: mspriet@ucdavis.edu. *Corresponding and presenting author. © 2012 AAEP.

1. Introduction
Osseous resorption of the flexor surface of the distal phalanx of the horse has been occasionally reported on magnetic resonance (MR) imaging. The objectives of this study were to establish the MR prevalence of this lesion in a population of horses with foot lameness and to assess the accuracy of radiographs to detect this lesion.

2. Materials and Methods
Horses with distal extremity MR and radiographs performed within 2 weeks of each other were included in the study. The flexor surface of the distal phalanx was graded independently on both modalities for the presence of osseous resorption. The sensitivity and specificity of radiography for identifying osseous resorption was calculated using MR as the gold standard.

3. Results
Eighty-two MR studies met our inclusion criteria; 8 presented with osseous resorption of the flexor surface of the distal phalanx. Concurrent injury to the deep digital flexor tendon and the navicular bone was a common finding. Radiography had a specificity of 0.96 and a sensitivity of 0.55 for detection of osseous resorption.

4. Discussion
Osseous resorption of the flexor surface of the distal phalanx is not an uncommon finding on MR examination in lame horses. The common association with other pathology within the foot suggests advanced disease. MR is the ideal modality to identify these lesions but some are also visible radiographically.

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