Association Between Suspensory Branch Desmopathy and Sesamoid Bone Pathology Seen With MRI

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When pathology associated with distal suspensory ligament desmopathy continues onto its insertion, there is significantly increased risk of proximal sesamoid bone pathology. Also, when there is an increase in the cross-sectional area of the ligament with desmopathy, there is a statistically significant higher risk of proximal sesamoid bone pathology, as seen with MRI. Authors’ addresses: Colorado State University, Veterinary Teaching Hospital, Fort Collins, CO, 80523 (Daniel); Alamo Pintado Equine Medical Center, 2501 Santa Barbara Avenue, Los Olivos, CA, 93441 (Judy); and VetRadiologist LLC, St Paul, MN 55105 (Saveraid); e-mail: adanielvet@gmail.com. *Corresponding and presenting author. © 2012 AAEP.

1. Introduction
Suspensory branch pathology can occur alone or with proximal sesamoid bone pathology; however, there are no studies that evaluate the ligamentous dimensions as they relate to disease of the bone. This study aims to describe the relationship between distal suspensory branch desmopathy and proximal sesamoid bone pathology via MRI characterization of signal intensity and ligamentous dimensions in clinical cases.

2. Materials and Methods
Between 2006 and 2010, cases presenting to an equine referral hospital were retrospectively reviewed. If cases met the following inclusion criteria, they were included in the study: had MRI of both fore or both hind fetlock joints; presence of unilateral, uniaxial suspensory branch desmopathy; unilateral lameness localized to the fetlock region.

2. Results
Twenty-six horses met the inclusion criteria for the study. Statistically significant differences were observed in the cross-sectional area of the ligament on MRI between horses with proximal sesamoid bone pathology and those without.

3. Discussion
MRI gives invaluable information regarding suspensory branch desmopathy and what risk factors determine whether proximal sesamoid bone pathology will or will not be present. This information may help guide diagnostic testing of these two structures.