Ultrasonographic Findings in Horses With Foot Pain but Without Radiographic Bone Abnormalities

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Ultrasound offers an easily available diagnostic tool for the evaluation of the digit in cases where radiographic diagnosis is unsuccessful. Authors’ addresses: Diagnostic Imaging Section (Rabba, Bolen, Busoni) and Equine Surgery and Anesthesia Section (Verwilghen, Salciccia), Faculty of Veterinary Medicine, University of Liège, B41, Bld. de Colonster, Sart-Tilman, 4000 Liège, Belgium; e-mail: denis.verwilghen@ulg.ac.be. © 2010 AAEP.

1. Introduction
Foot pain is a common cause of lameness in horses. When no radiographic abnormalities are detected, soft tissue assessment remains a diagnostic challenge without magnetic resonance imaging (MRI). The purpose of this study was to review ultrasound (US) findings in the front feet in a series of clinical cases with lameness responding to palmar digital nerve blocks but without radiographic bone abnormalities.

2. Materials and Methods
Medical records of horses that underwent a complete US examination of the digit were collected. History, clinical findings, and radiographic and US results were reviewed.

3. Results
The records of 39 horses satisfied the inclusion criteria. Thirty horses had lesions affecting the deep digital flexor tendon (DDFT), and 27 had abnormalities in the distal interphalangeal joint, of which 6 had a visible abnormality in one collateral ligament. Distension of the podotrochlear bursa was seen in 22 horses, and abnormalities in the navicular bone ligaments were detected in 2 horses. Irregularity of the navicular bone flexor surface was found in eight horses. In 3 of the 39 horses, the DDFT was the only structure affected. The other 36 horses had US abnormalities in more than one anatomical structure.

4. Discussion
US diagnosis of soft tissue damage in the foot was possible in cases where radiographic diagnosis was unsuccessful. US offers an easily available diagnostic tool for an evaluation of the digital soft tissues when MRI is not possible because of availability or financial constraints.