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Severe edematous synovial thickening with or without effusion should heighten clinical suspicion of sepsis. Authors’ addresses: William R. Pritchard Veterinary Medical Teaching Hospital (Young) and Department of Surgical and Radiological Sciences (Whitcomb, Vaughan, MacDonald), University of California, One Shields Avenue, Davis, California 95616; e-mail: alexyoungvet@yahoo.com.au. © 2010 AAEP.

1. Introduction
Diagnosis of synovial sepsis can be challenging, especially when synoviocentesis is complicated by lacerations or cellulitis. Ultrasonography is widely available in equine practice, but ultrasonographic features of synovial sepsis are not well described.

2. Materials and Methods
Ultrasonographic examinations were reviewed from 62 horses with synovial sepsis confirmed by total nucleated cell count $>30,000/\mu l$, neutrophils $>90\%$, bacterial culture, or evidence of wound communication. Images were graded for effusion (amount/character), synovial thickness, and synovial thickening-to-effusion (ST:E) ratio.

3. Results
There were 7 foals, 9 juveniles, and 46 adults. Duration to presentation was 1–103 days. Twenty-one anatomic structures were affected, for a total of 70 septic structures. Severe lameness was present in 84% of horses with limb involvement. Seventeen of 43 wounds showed some drainage. Ultrasound was performed within 48 h of arrival in 77% of horses. Effusions were absent-mild (44), moderate (19), and severe (7). Synovium was severely thickened in 84% of structures; 49 showed a $>75:25$ ST:E ratio (score 4), and 14 showed a 50:50 ratio (score 3). Only four structures showed severe echogenic effusion (score 2). Three horses showed no ultrasonographic evidence of sepsis (score 1). Ultrasound guidance was used to obtain synovial fluid from 26 structures.

4. Discussion
Severe synovial thickening with or without effusion was the predominant feature of synovial sepsis, regardless of the presence of a draining wound. Ultrasound was helpful to locate small effusions for synoviocentesis and to prioritize sampling in regions with multiple synovial structures.