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Early recognition with prompt and appropriate treatment of penetrating injuries to the central region of the foot results in a favorable prognosis. However, synovial involvement is a complicating factor that negatively affects outcome. Authors’ addresses: William R. Pritchard Veterinary Medical Teaching Hospital (Kilcoyne); Department of Surgical and Radiological Sciences (Dechant); Department of Population Health and Reproduction (Kass); and Department of Medicine and Epidemiology (Spier), School of Veterinary Medicine, University of California, Davis, California 95616; e-mail: isabellekilcoyne@hotmail.com. © 2010 AAEP.

1. Introduction
The objective was to examine the records of horses with penetrating injury to the central region of the foot and to determine the outcomes associated with this injury and factors affecting management and outcome.

2. Materials and Methods
Case records of 63 horses incurring puncture wounds through the frog or collateral sulci admitted to the University of California at Davis Veterinary Medical Teaching Hospital between 1998 and 2008 were reviewed. Factors evaluated included signalment, degree of lameness, foot affected, duration between injury and presentation, and treatment.

3. Results
Overall, 60% returned to soundness. Horses treated earlier after injury had a better prognosis. Horses with a hindlimb injury tended to have a more favorable outcome than those with forelimb injury. Thirteen horses were euthanized at presentation based on synovial structure involvement and financial constraints. Of the 35 horses treated conservatively or by standing surgical procedures, 32 (91.4%) horses returned to previous level of soundness. Fifteen of 63 horses underwent surgical treatment, of which 6 (40%) horses became sound for intended use and 7 (46.7%) were euthanized. Ten of 34 (29%) horses with synovial structure involvement regained full soundness.

4. Discussion
A favorable prognosis can be anticipated for horses with penetrating injuries located centrally in the foot, especially if managed early after injury. Penetration of a synovial structure carries a poorer prognosis and should be considered during case management.