Equine Distal Limb Wounds Managed With Phalangeal Casts: 50 Cases

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In this study, wounds involving the pastern and foot treated with phalangeal casts carried a good prognosis for soundness (89.4%) and cosmetic healing (89.5%). The phalangeal casts were well tolerated and proved to be an effective treatment for wounds involving the pastern and foot region.

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1. Introduction
The purpose of this study was to describe the application of a phalangeal cast for the treatment of distal limb wounds in the pastern and foot region and to evaluate healing and soundness of horses treated with phalangeal casts for stabilization of wounds in the pastern and foot region.

2. Materials and Methods
Medical records of 49 horses that were treated for 50 cases of wounds in the pastern and foot region with phalangeal casts all applied in a similar fashion at equine referral hospitals from 1995–2006 were reviewed, and follow-up information was obtained.

3. Results and Discussion
Wound therapy consisted of wound debridement, lavage, wound closure (28 wounds), cast application, and antibiotics (84%). At follow-up, the majority of horses were sound (42 of 47 wounds; 89.4%), three horses were still lame, and one horse was euthanized because of persistent lameness. Three horses were lost to follow-up. There was no difference between the outcomes of horses treated acutely or after a 24-h delay. Only eight cases had wounds with synovial structure involvement, and three of these cases were infected for >2 days. These small number of cases with synovial structure involvement did not negatively influence outcome. The phalangeal casts were well tolerated and proved to be an effective treatment for wounds involving the pastern and foot region.
Fig. 1. Images of a phalangeal cast placed on a standing horse (A) after placement of a stockinet and orthopedic felt (B), followed by custom support foam and veterinary casting tape. (C) Next the limb was elevated to incorporate the veterinary casting tape on the bottom of the foot, and (D) polymethylmethacrylate was added to the bottom of the cast. Images reprinted with permission from Ketzner KM, Stewart AA, Byron CR, et al. Wounds of the pastern and foot region managed with phalangeal casts: 50 cases in 49 horses (1995–2006). Aust Vet J 2009 Sep;87(9):363–8.

Fig. 2. Example of a wound that involved the digital flexor tendon sheath (case 4) after initial debridement (A) before casting, (B) during casting, and (C) 6 wk after initial presentation. Images reprinted with permission from Ketzner KM, Stewart AA, Byron CR, et al. Wounds of the pastern and foot region managed with phalangeal casts: 50 cases in 49 horses (1995–2006). Aust Vet J 2009 Sep;87(9):363–8.