Palmar Process Fractures in Foals: A Prospective Radiographic Survey of the Incidence and Duration of Fractures on a Virginia Farm

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Palmar process fractures were detected in all foals born on a Warmblood breeding farm. Most foals did not show clinical lameness. Most fractures occurred between 2 to 4 mo of age and were healed by 8–12 mo of age. Authors’ addresses: Department of Large Animal Clinical Sciences, Phase II, Virginia-Maryland Regional College of Veterinary Medicine, Virginia Tech, Duck Pond Drive, Blacksburg, Virginia 24061-0442 (Dascanio, Pleasant, Witonsky, Lewis, Schroeder, Gray, Ferguson); and Department of Animal and Poultry Sciences, Virginia Tech, 3450 Litton Reaves Hall, Blacksburg, Virginia 24061-0306 (Splan); e-mail: jjd@vt.edu. © 2009 AAEP.

1. Introduction
Palmar process fractures have previously been shown in foals. The incidence has been reported as 19–80% of foals on specific farms. Lameness is variable, and many foals appear normal.

2. Materials and Methods
Digital radiographs were taken of 20 Warmblood foals born in 2008 on a Virginia farm at 1 wk of age. Additional radiographs were taken at 1, 2, 3, 4, 6, 8, and 12 mo of age. A dorso-palmar, latero-medial, and 60° dorso-palmar radiograph of both front feet were obtained. Radiographs were evaluated by three clinicians, and a consensus opinion was used to diagnose fractures. Four foals were sold, and therefore, there was no follow-up after their 4-mo series.

3. Results
All 20 foals had evidence of at least one palmar-process fracture on radiographs. These involved either the medial and/or lateral palmar processes of one or both front feet and included both large and small fragmentations. The fractures were most evident on 60° dorso-palmar views followed by dorso-palmar and latero-medial views. Most foals were not clinically lame when diagnosed with a fracture.

4. Discussion
The cause of palmar process fractures is not known. It has been postulated that the pull of the deep digital flexor tendon in combination with exercise on hard surfaces may result in overwhelming shear forces on the palmar process. Fractures seem to heal without complication over 6–8 mo. Palmar process fractures seem to be a common occurrence in growing horses.