Proceedings of the 56th Annual Convention of the American Association of Equine Practitioners

- AAEP -

December 4-8, 2010
Baltimore, Maryland, USA

Next Meeting:

Nov. 18-22, 2011 - San Antonio, Texas, USA

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Radiographic Abnormalities of Thoroughbred Horses in 2-yr-Old In-Training Sales and Associations With Race Performance

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A lower proportion of horses with specific proximal dorsal phalangeal, proximal sesamoid bone, or tarsal bone abnormalities raced and/or earned more than $25,000 than horses without any lesions. Authors’ addresses: Department of Surgical and Radiological Sciences (D.M. Meagher, Puchalski), J.D. Wheat Veterinary Orthopedic Research Laboratory (Labadie, Stover), and Department of Medicine and Epidemiology (Gardner), School of Veterinary Medicine, University of California, Davis, California 95616; and Valley Equine Associates, Ranson, West Virginia 25438 (D. T. Meagher); e-mail: dtmeagher@hotmail.com. *Presenting author. © 2010 AAEP.

1. Introduction
Veterinarians evaluate radiographs of prospective Thoroughbred racehorses for potential buyers. Although the association of yearling radiographic abnormalities on race performance has been studied,1 radiographic abnormalities of 2-yr-old horses in training have not been studied. Our goals were to identify radiographic abnormalities of 2-yr-old Thoroughbred racehorses in training and determine whether abnormalities affect future race performance.

2. Materials and Methods
Repository carpal, fetlock, stifle, and hock radiographs of horses consigned to 2-yr-old in-training sales (Barretts Equine Sales Limited, Pomona, CA) from 1997 to 2001 were examined. Horses with abnormal findings were classified by lesion type and location. Race performance variables were compared between horses with radiographic abnormalities (cases) and horses without radiographic abnormalities (controls) using non-parametric techniques.

3. Results
Radiographs were reviewed for 953 horses; 69% controls and 31% cases. Lesions were most prevalent in the fetlock. Cases were less likely to start a race or earn more than $25,000 than controls. Horses with proximal dorsal phalangeal articular margin fracture fragments, forelimb proximal sesamoid bone fracture (particularly apical, medial bone), sesamoiditis, or tarsal bone wedging were less likely to start a race and/or earn more than $25,000.
4. Discussion

Specific radiographic abnormalities were associated with lower race performance. However, none of the individual lesions prevented all affected horses from racing.

Acknowledgments

This work was supported by the Southern California Equine Foundation and the Center for Equine Health with funds provided by the State of California pari-mutuel fund and contributions by private donors.

Reference and Footnote


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