Relationship Between Radiographic Changes of the Medial Femoral Condyle and Performance in Quarter Horse Cutting Horses

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Lesions of the medial femoral condyle (MFC) on repository radiographs can be correlated with performance parameters in cutting horses. Breed- and discipline-specific studies of radiographic repositories are warranted to determine the relationship between radiographic lesions and performance. Authors' address: Gail Holmes Equine Orthopaedic Research Center; Colorado State University; 300 W. Drake Road, Fort Collins, Colorado 80523-1678; e-mail: myra@colostate.edu. © 2010 AAEP.

1. Introduction

Although multiple studies have compared radiographic repository findings and performance outcomes in Thoroughbred racehorses, not much literature exists for other disciplines. This study examines the correlations between radiographic changes of the medial femoral condyle (MFC) and performance outcomes in Quarter Horse cutting horses.

2. Materials and Methods

Changes of the MFC on repository radiographs of 212 horses were compared with performance. The MFC grading scale was as follows: grade 1, a flattened contour; grade 2, subchondral bone sclerosis and/or incomplete defects in the subchondral; grade 3, wide, shallow complete subchondral defects; grade 4, subchondral cystic lesion. Outcome parameters included whether the horse competed and amount of money earned. For horses that did not compete, follow-up information was obtained as to the reason for not competing.

3. Results

Horses with grade 4 lesions of the MFC were significantly less likely to compete than horses with no lesions. Horses with grade 3 lesions were significantly less likely to earn money. Bilateral lesions significantly decreased the likelihood to compete. No significant difference existed between horses with grade 1 lesions and with no lesions.

4. Discussion

The findings of this study can help veterinarians in pre-sale situations to better advise their clients on the likelihood of radiographic lesions of the MFC to affect certain performance outcomes.