2001

What's Your Radiographic Diagnosis?

Elizabeth Riedesel

Iowa State University

Follow this and additional works at: http://lib.dr.iastate.edu/iowastate_veterinarian

Part of the Large or Food Animal and Equine Medicine Commons, and the Radiology Commons

Recommended Citation

Riedesel, Elizabeth (2001) "What's Your Radiographic Diagnosis?," Iowa State University Veterinarian: Vol. 63: Iss. 1, Article 16.
Available at: http://lib.dr.iastate.edu/iowastate_veterinarian/vol63/iss1/16

This Article is brought to you for free and open access by the College of Veterinary Medicine at Digital Repository @ Iowa State University. It has been accepted for inclusion in Iowa State University Veterinarian by an authorized administrator of Digital Repository @ Iowa State University. For more information, please contact digirep@iastate.edu.
What's Your Radiographic Diagnosis?

Elizabeth Riedesel, DVM, DACVR

Presentation
A four year old, Thoroughbred mare presents for lameness in the left front leg of several weeks duration. At physical examination, there is very mild swelling along the dorsum of the metacarpus. Deep palpation of this region is moderately painful. Lameness is not evident at the walk but is mild after trotting. Radiographs of the metacarpus were taken. (Fig. 1)

Radiographic Findings
A 1.5 cm long oblique radiolucent line is present in the dorsal-lateral diaphyseal cortex of metacarpal 3. The lucent line courses from dorsodistal to palmaroproximal with incomplete penetration of the endosteum. Periosteal and endosteal new...
bone formation are not evident. (Fig.2)

**Radiographic Diagnosis and Discussion**

Dorsal cortical stress fracture of the third metacarpal bone. Dorsal cortical stress fracture of the third metacarpal bone is a moderately common injury of the young Thoroughbred in race training. Three-year-old males are noted to be particularly affected and the left metacarpus is most frequently fractured. The dorsal cortical stress fracture is considered to be one subset of the response of the dorsal cortex of the metacarpus to repetitive bending stresses. Mild to moderate periosteal new bone reaction can also be seen with or without fracture. This type of stress fracture can be very subtle requiring detail radiography or xeroradiography using incrementally oblique projections. Nuclear scintigraphy is quite sensitive in detection of abnormal bone activity associated with these fractures earlier than they can be demonstrated radiographically.

**References**


---

The Veterinary Medical Alumni Association at Iowa State University (VMAA@ISU) is a nonprofit organization composed of graduates of the ISU College of Veterinary Medicine. Annual dues of $25 support the ISU Veterinarian, alumni recognition awards, student scholarships, and receptions at homecoming and four major veterinary meetings. Members also receive a free subscription to the ISU Veterinarian. For more information or for assistance with a class reunion, please contact Dr. Ron Morgan at (515)233-5183 or e-mail to rmorgan69@prodigy.net. Mail inquiries and dues to: VMAA@ISU, P.O.Box 1726, Ames, IA, 50010.