

What is Your Radiographic Diagnosis?

Neil Dyer, BS*
E. A. Riedesel, DVM**

History and Physical Exam

A yearling Quarter Horse filly was presented for a mild lameness of the right hind leg of three months duration. Physical examination revealed no areas of soft tissue swelling but a mild increase in lameness with stifle joint flexion.

Radiographs

Lateral-medial and caudal-cranial views of the right stifle joint were taken and are shown in Figures A and B.

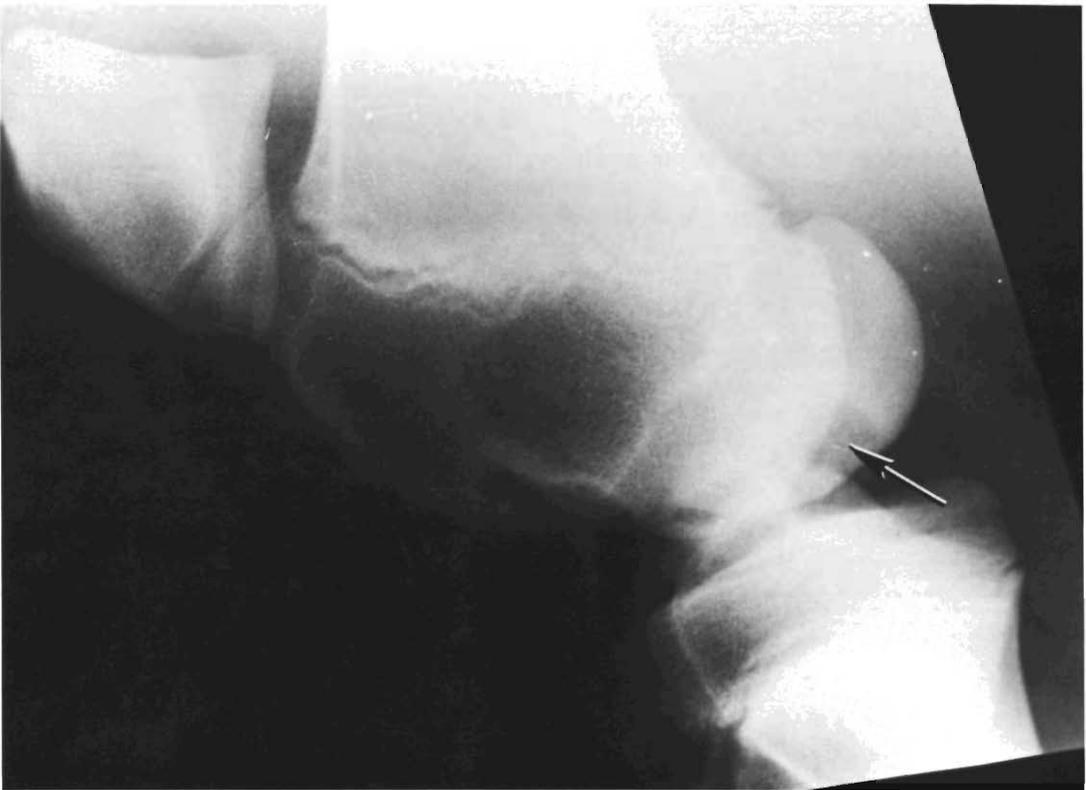


FIGURE A: Lateral - medial view of the right stifle joint

*Mr. Dyer is a first-year student in the College of Veterinary Medicine at Iowa State University.

**Dr. Riedesel is an associate professor in the Department of Veterinary Clinical Sciences at Iowa State University.

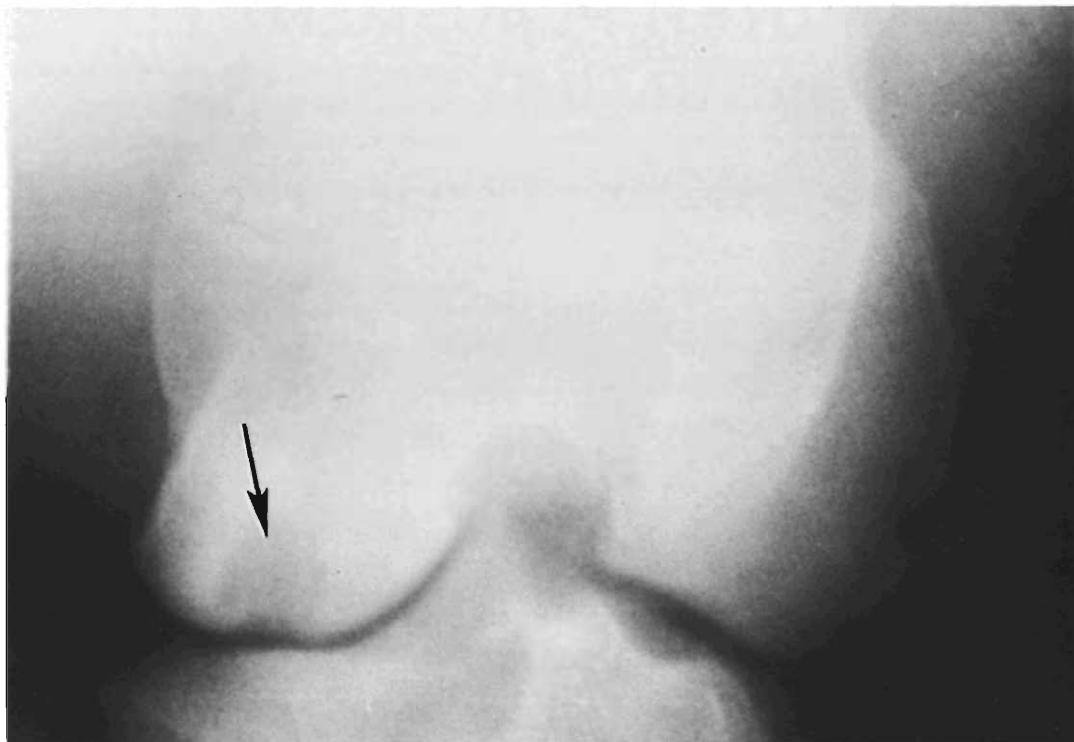


FIGURE B: Caudal-cranial view of the right stifle joint.

Radiographic Findings

An approximately 1.5 cm diameter radiolucency is identified in the subchondral bone of the medial femoral condyle. The subchondral articular surface is flattened at this region as seen in both views. The remainder of the joint is considered radiographically normal.

Radiographic Diagnosis

Subchondral cyst-like lesion compatible with osteochondrosis.

Discussion

Osteochondrosis refers to a failure of normal enchondral ossification which affects epiphyseal and/or metaphyseal cartilage. In the equine, two general forms of osteochondrosis have been identified affecting the epiphyseal cartilage: osteochondritis dissecans and subchondral cystic lesions.¹ The pathogenesis of the subchondral cystic lesion is thought to be due to retention of degenerate cartilage within bone.² The inciting cause of the enchondral ossification failure is unknown. Several factors have been suggested as playing some role in the development of osteochondrosis. These are rapid growth, genetic predisposition, nutritional excesses or imbalances, and superimposed trauma on the cartilage.² The

lesions of osteochondrosis occur at specific anatomical sites. The most common site of the subchondral cystic lesion is the stifle with a preferential occurrence in the medial femoral condyle. Other sites of occurrence include the distal radius and carpal bones, distal first phalanx, proximal second phalanx, proximal tibia, and others.² The size and shape of the lesions range from very shallow indentations to fairly large circular to oval regions of radiolucency. Lesions in the medial femoral condyle are best demonstrated radiographically in caudal-cranial or caudo-lateral-craniomedial oblique projections. Treatment of subchondral cystic lesions ranges from conservative rest or continued moderate exercise to surgical curettage.^{1,2}

REFERENCES

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2. McIlwraith, C.W.: Subchondral cystic lesions (Osteochondrosis) in the Horse. *The Compendium on Continuing Education*. 4(9):S394-S404, 1982.