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What is Your Radiographic Diagnosis?

Neil Dyer, BS*
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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.

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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. The pathogenesis of the subchondral cystic lesion is thought to be due to retention of degenerate cartilage within bone. 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. 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. 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-cranio-medial oblique projections. Treatment of subchondral cystic lesions ranges from conservative rest or continued moderate exercise to surgical curettage.

REFERENCES