**Case 2**

**History**
Pain. Evaluate for possible fracture.

**Diagnosis?**
Polyostotic Fibrous Dysplasia.

**Findings**
Plain film of the pelvis shows a "Shepherd’s Crook" deformity of the femoral neck. There is a long segment expansile lesion of the proximal femur with endosteal scalloping and a ground glass matrix. A second geographic lesion with a thin sclerotic margin, a short transition zone, and a ground glass matrix is noted in the left pelvis.

**Discussion**
Fibrous dysplasia is a developmental dysplasia where bone is displaced by fibrous tissue. Irregularly arrayed trabeculae of immature bone formed by a metaplasia of fibrous tissue may be present. Fibrous dysplasia may involve one bone (monostotic, 80 percent) or multiple bones (polyostotic, 20 percent). The cause of fibrous dysplasia is unknown and is not hereditary.

Polyostotic fibrous dysplasia has a predilection for involvement of one side of the body seen in 90 percent of cases. Polyostotic fibrous dysplasia may be associated with McCune – Albright Syndrome and other endocrine anomalies. Sarcomatous transformation is rare.

Radiographic findings include expansile lesions that may exhibit endosteal scalloping. The replacement of bone by fibrous tissue leads to a “Smokey” or “ground glass” appearance to the lesions. Some lesions may appear “cystic” with a thin sclerotic rim as in the current case. Bones are prone to fracture. Fractures of the femoral neck may contribute to the classic “Shepherd’s Crook” deformity.

**References**

Submitted by: Paul Clifford, M.D.
Reviewed by: Robert Martinez, M.D.