Synovial Herniation Pits: A Pseudo-Lesion of the Femoral Neck

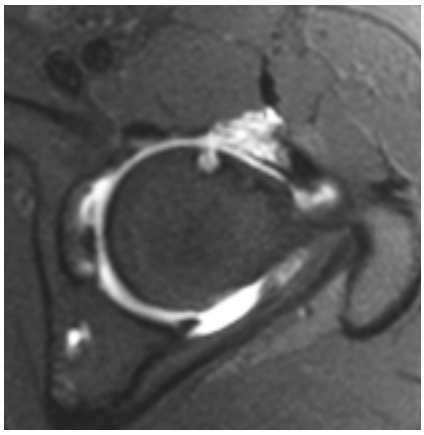
Yehuda Freedman MD and Sigal Tal MD

Radiology Section, Maccabi Healthcare Services, Tel Aviv, Israel

IMAJ 2004;6:189

Anteroposterior radiograph of the right hip demonstrates a well-circumscribed, round lucent area (arrow) in the superolateral portion of the femoral neck.

Lateral radiograph of the groin demonstrates the anterior location of this area (arrow).



Axial T1-weighted fat-saturated magnetic resonance arthrogram demonstrates fluid signal intensity within the herniation pit.

Round, well-circumscribed lucent areas located at the anterolateral cortex of the femoral neck are normal variant termed herniation pits. They are distinguished by their appearance and location and are thought to represent sites of ingrowth of fibrous and cartilaginous elements in a unilateral or bilateral distribution. The changing relationship between the joint capsule and the iliopsoas muscle appears to be important in the pathogenesis of the herniation pit, especially in athletic individuals. Although these regions are generally stable, they may rarely disappear spontaneously. The only confusing feature is that they may be seen to become enlarged over time [1]. Recent evidence suggests that enlarging or large synovial herniation pits may be symptomatic. In some cases, the overlying cortex may fracture and significant clinical manifestations may be apparent [1,2].

Asymptomatic pits may be associated with positive bone scintigraphy [3]. If magnetic resonance images are obtained, they will demonstrate fluid signal intensity.

References

1. Crabble JP, Martel W, Matthews LS. Rapid growth of femoral herniation pit. *AJR Am J Roentgenol* 1992;159:1038–40.
2. Daenen B, Preidler KW, Padmanabhan S, et al. Symptomatic herniation pits of the femoral neck: anatomic and clinical study. *AJR Am J Roentgenol* 1997;168:149–53.
3. Sopov V, Fuchs D, Bar-Meir E, Gorenberg M, Groshar D. Clinical spectrum of asymptomatic femoral neck abnormal uptake on bone scintigraphy. *J Nucl Med* 2002;43(4):484–6.

Correspondence: Dr. S. Tal, Maccabi Heathcare Services, 1 Sahlab Street, Kiryat Rishon, Rishon Lezion, Israel
Phone: (972-3) 951-2636
email: tal_si@mac.org.il

Although the world is full of suffering, it is full also of the overcoming of it

Helen Keller (1880-1968), American social worker. At the age of 19 months she lost her sight and hearing through an illness. Despite these handicaps she learned to speak, read and write, and finally graduated from Radcliffe College (Cambridge, Mass). She lectured in many countries and raised money for the education of handicapped people.