Myositis Ossificans

By Series editor: Eric Bogner MD [2]

In this case study, an elderly woman with pain in her left hip had asymptomatic myositis ossificans in the right. She had denied any trauma, which is the usual cause in the elderly.

This 87-year-old woman presented with left hip pain. MRI images showed an asymptomatic mass in her right hip. She denied any trauma.

A radiograph taken after open reduction and internal fixation of the left femur showed no right sided gluteal mineralization.

However, an MRI demonstrated a right gluteal mass which was asymptomatic. There is a prominent edema pattern in the adjacent musculature.

Ultrasound shows a heterogeneous mass with prominent posterior acoustic shadowing.
Comparison axial images taken one month apart demonstrate early peripheral mineralization of the mass.

**Diagnosis:** Myositis ossificans

Muscle that has sustained trauma undergoes a process of formation of ossification in the musculature. In the first 8 weeks following the injury on MRI, a heterogeneous mass is frequently seen with a profound amount of surrounding edema. With time, a peripheral low signal intensity rim forms corresponding to peripheral ossification. In its early forms, the peripheral ossification may have a somewhat amorphous appearance on CT or radiograph without clear trabecular formation.
With aging, less significant trauma is needed to cause these changes. Frequently, patients do not recall a discrete event.

Ultrasound is useful to demonstrate acoustic shadowing indicating a dense substance, often calcification, ossification, or marked fibrosis. Ultrasound can also be used, as in this case, for biopsy to confirm the diagnosis.

Adapted from the teaching files of the Department of Radiology and Imaging at Hospital for Special Surgery. Special thanks to HSS Department of Pathology for their assistance in this diagnosis.

References:


Disclosures:
Adapted from the teaching files of the Department of Radiology and Imaging at Hospital for Special Surgery. Series editor: Eric Bogner MD, Associate Attending Radiologist.

References:


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