Secondary tumoral calcinosis with intraosseous extension

L. Van Muylder, H. Declercq, F.M. Vanhoenacker

A 97-year old Caucasian woman suffering from chronic renal insufficiency was admitted with progressive pain at the left hip when mobilized. Plain radiographs showed a large lobulated well-demarcated calcified mass adjacent to the greater trochanter of the left hip (Fig. A). On subsequent CT-scan (Fig. B, axial image; Fig. C, coronal reformatted image), the mass was heterogeneously calcified with dense and less dense areas. The lesion was located within the subgluteus medius bursa and caused cortical destruction of the greater trochanter with extension of calcifications within the adjacent medullary cavity. Based on the imaging findings and the past medical history of chronic renal failure, the diagnosis of secondary tumoral calcinosis was made. Because of the advanced age of the patient, no further therapy was installed.

Comment

Tumoral calcinosis is a descriptive term used for mass-like periarticular calcific deposits, irrespective of its etiology. The peri-articular tissues of the hip, elbow, shoulder, foot and wrist are most frequently involved. The lesion is usually solitary, although multiple foci may be seen as well. The disorder can be idiopathic (primary form) or can accompany several other disorders (secondary form). On imaging and histology, these two forms are indistinguishable. The secondary form is mainly associated with chronic renal failure, having a prevalence of 0.5% to 1.2% in patients on hemodialysis. The underlying etiology is primarily believed to be due to secondary hyperparathyroidism.

Clinically, as in our patient, it may interfere with joint motion. Imaging features consist of multilobulated, amorphous peri-articular calcific deposits, most often along the extensor surfaces of the joint. The internal structure may be either homogeneous or heterogeneous, containing intralobular fluid-calcium levels and/or peripheral rim calcification with a low attenuation center. Cortical destruction and intramedullary extension is rare and may be due to chronic pressure erosion. Although the lesion is readily detected on plain radiographs, CT is the preferred examination for assessment of intralobular heterogeneity and local extension. Treatment is usually conservative with phosphate depletion medication. In case of failure of this therapy, subtotal parathyroidectomy should be considered.

Reference