

Monostotic Paget's Bone Disease – a radiological diagnosis

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Female patient, 70 years of age, Caucasian, referred to the Medical Consultancy with persistent bone pain in the right thigh which is unrelated to movement, lasting for one year, and medicated various times with AINE, with temporary relief. Without fever or constitutional symptoms. No alterations were apparent on physical examination, except for a slight increase in temperature in the right thigh. X-ray was performed of the spleen and limbs, revealing marked trabecular disorganization in the right femur, with alternance between osteopenic and osteosclerotic areas, increase in volume and cortical thickening (Fig. 1). The remainder of the radiological study showed no alterations. The osteoarticular scintigram showed hyper-uptake throughout the right femur, compatible with monostotic Paget's Disease (PD) (Fig. 2).

Analytically, there was a slight increase in total Alkaline Phosphatase and in ESR electrophoretic Proteinogram, transaminases, thyroid function, PTH, vitamin D, calcium, phosphorus and tumor markers within the normal values.

Bearing in mind the imaging findings, markers of bone metabolism were requested, revealing a slight increase in bone ALKALINE PHOSPHATASE, deoxyribonucleic acid and N-telopeptide.

For the bone pain¹, risedronate therapy was initiated (35 mg id - 2 months) with improvement in the symptoms. The patient was kept under observation at the clinic.

Paget's Bone Disease is characterized by an increase in bone remodeling, with the bone being reformed in a structurally disorganized way, making it more susceptible to deformities and fractures. It affects around 2-3%² of the population aged over 50 years, and typically affects more than one bone segment (polyostotic disease), with preferential involvement of the pelvis, spinal column, femur, cranium and ti-



FIG. 1
Pelvis X-ray: Trabecular disorganization of the right femur with increase in dimensions and alternance between osteopenic/osteosclerotic areas – “rockwool” appearance.

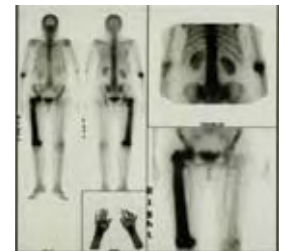


FIG. 2
Osteoarticular scintigram with marked hyperfixation of the radioisotope in the right femur (right elbow – area of previous traumatism).

bia. Monostotic involvement is less frequent, and is described in only 17% of cases² and normally accompanied by less accentuated increases in the markers of bone metabolism.

The condition may be asymptomatic, or it may be accompanied by pain, deformities, fractures, secondary osteoarthritis, deafness and neurological complications.

The diagnosis results in the association of clinical condition, imagiological findings³ (radiology and scintigram) and laboratory findings⁴ (increase in markers of bone turnover).

The standard drug treatment involves the use of bisphosphonates.¹ ■

References

1. Langston AL, Ralston SH. Management of Paget's disease of bone. *Rheumatology (Oxford)*. 2004; 43 (8): 955-959.
2. Cooper C, Harvey NC, Dennison EM et al. Update on the epidemiology of Paget's disease of bone. *J Bone Miner Res*. 2006; 21 Suppl 2:3-8.
3. Vellenga CJ, Bijvoet OL, Pauwels EK. Bone scintigraphy and radiology in Paget's disease of bone: a review. *Am J Physiol Imaging*. 1998; 3 (3):154-168.
4. Shankar S, Hosking DJ. Biochemical assessment of Paget's disease of bone. *J Bone Miner Res*. 2006; 21 Suppl 2:58-63.