Paget disease of bone

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A 65-year-old man was referred to the endocrinology clinic for evaluation of an elevated alkaline phosphatase (ALP) level of 332 (normal range 30–120) U/L on blood work obtained during a routine health visit.

The patient's bone-specific ALP was elevated at 83.3 (normal range 5.6–29) µg/L. Serum 25-hydroxyvitamin D, γ-glutamyl transferase, calcium, phosphorus and parathyroid hormone were normal. The patient reported no history of fracture and no bone pain, hearing loss or headache. Plain radiography showed bone changes of Paget disease in the right proximal femur (Figure 1). Bone scintigraphy showed increased radiotracer uptake in the proximal third of the right femur, sacrum, preorbital regions and T3 vertebra (Appendix 1, available at www.cmaj.ca/lookup/doi/10.1503/cmaj.230164/tab-related-content). We diagnosed Paget disease of bone and treated the patient with 5 mg of intravenous zoledronic acid. Six months after treatment, the patient's ALP level had normalized, and he remained asymptomatic.

Paget disease is a focal disorder of bone metabolism. Its prevalence increases with age, and it affects 1%–5% of people older than 50 years.[1] Most patients with Paget disease are asymptomatic; the most common presenting symptom is bone pain. Paget disease is often suspected because of an elevated ALP level and is diagnosed based on characteristic radiological abnormalities such as trabecular and cortical thickening, bone deformity and osteosclerosis. A skeletal survey is not required, but a baseline radionuclide bone scan should be obtained to document the extent of skeletal involvement.[1] Involvement of weight-bearing bones in asymptomatic patients is among the indications for treatment to decrease the risk of fracture and bone deformity; however, the quality of evidence to support this practice is low.[2] Asymptomatic patients with limited skeletal involvement and mild ALP elevations can be monitored with yearly biochemical testing without treatment.[2] A single infusion of 5 mg intravenous zoledronic acid is the treatment of choice and may need to be repeated if ALP levels do not normalize.[3] Repeat imaging is not needed, although new skeletal lesions should prompt workup for disorders other than Paget disease.

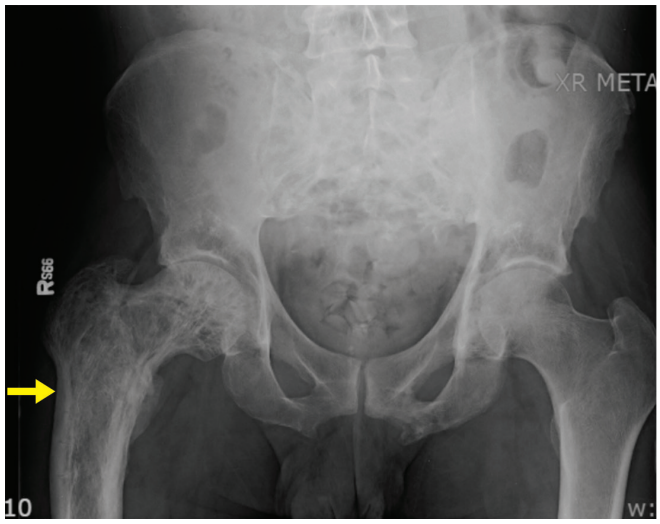

Figure 1: Pelvic radiograph of a 65-year-old man showing coarsening of the trabecular pattern of the right femur with marked cortical thickening (arrow) and narrowing of the joint space, consistent with osteoarthritis secondary to pagetic deformity.

Competing interests: None declared.

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The authors have obtained patient consent.

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References

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