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IMAGE/VIDEO CASE

# Pain as a Clinical Presentation of Osteopoikilosis

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**Disclosures**
Disclosure forms are available with the article online.

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## Abstract
Osteopoikilosis, or disseminated condensing osteopathy, is an osteosclerosing dysplasia that is a rare genetic disorder of autosomal-dominant genetic transmission, and recent research suggests that the possible cause of osteopoikilosis might be the loss of function of the LEM domain-containing gene 3 (LEMD3). We describe the case of a young man with arm pain associated with increased volume, functional limitation, and fever who presented to the emergency department. Radiographic and magnetic resonance images are provided, which reveal bilateral periarticular osteosclerotic lesions in the pelvis, humeral head, and scapular region, showing no signs of malignancy.

## Case Report
A 23-year-old man presented to the emergency department with a 1-day history of right arm pain, limiting the functionality of the limb, as well as fever. The patient did not report experiencing any other constitutional symptoms and had no personal or family history of any other bone pathologies. Clinical examination revealed an increase in volume in the right arm, of solid consistency, and nonmobility, which generated a limitation of joint range for abduction of the upper extremity.

Findings on radiograph showed multiple radio-opaque lesions of different diameter and periarticular distribution in the pelvis, humeral head, scapular region, and bilateral clavicle associated with faint radiolucent nonexpansive areas. The described characteristics are compatible with bone islets with probable relation to osteopoikilosis (OPK) (Figures 1 and 2). Magnetic

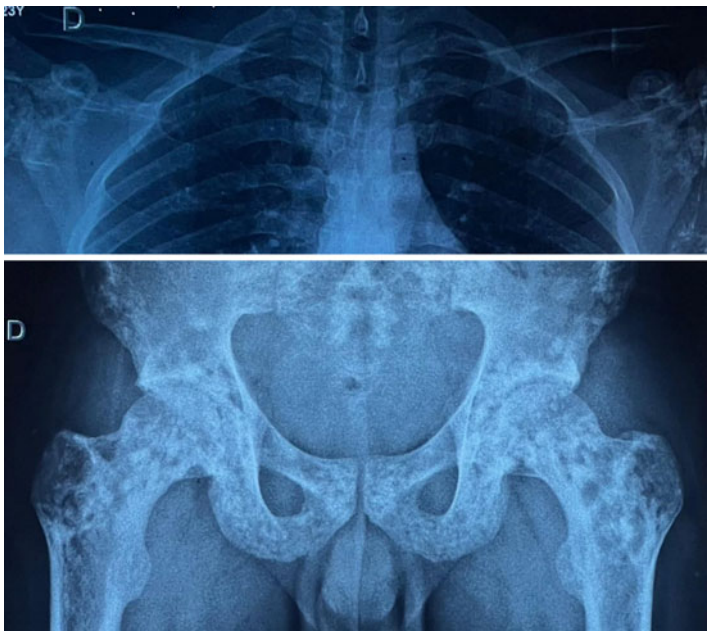



**Figure 1.** **Anteroposterior radiograph of the shoulder (*top*) and pelvis (*bottom*) revealed multiple sclerotic lesions bilaterally distributed.**



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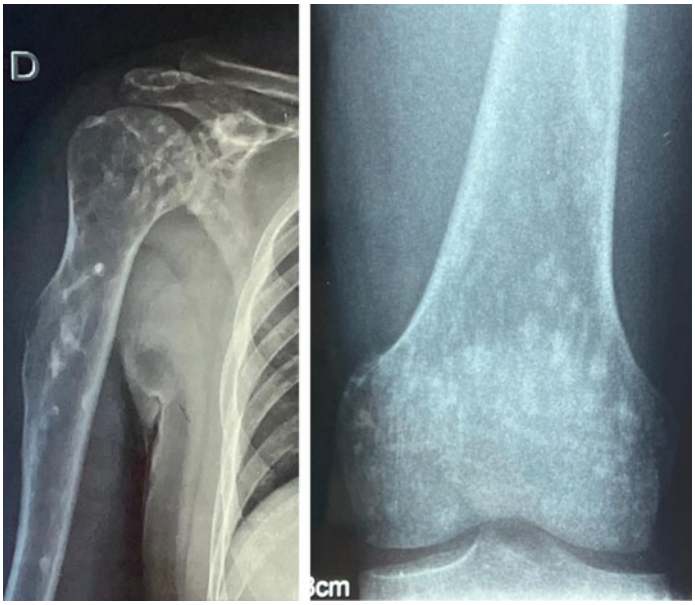


**Figure 2.** **Anteroposterior radiograph of the right humerus (*left*) and the left knee (*right*) of the patient, showing multiple well-defined, sclerotic lesions.**

resonance imaging showed an expansive lesion on the proximal humerus without evidence of aggressive periosteal reaction or extraskeletal invasion (Figure 3).

It has been described that OPK is asymptomatic, and the diagnosis is usually an incidental radiologic finding; however, some patients may present manifestations such as joint pain and effusion or skin lesions (1, 2). Radiologically, symmetrical sclerotic bone lesions are seen, without involvement of the osseous cortex, and it is described that there is a polyostotic and polytopic involvement (3).

Patients with OPK can live without treatment (4). In our case, the unusual presentation associated with pain was managed successfully with a short course of nonsteroidal anti-inflammatory drugs, and there was no need to provide a discharge prescription. The diagnosis of OPK is important to determine whether there are associated medical conditions that require treatment and to avoid the use of unnecessary, invasive tests (5).

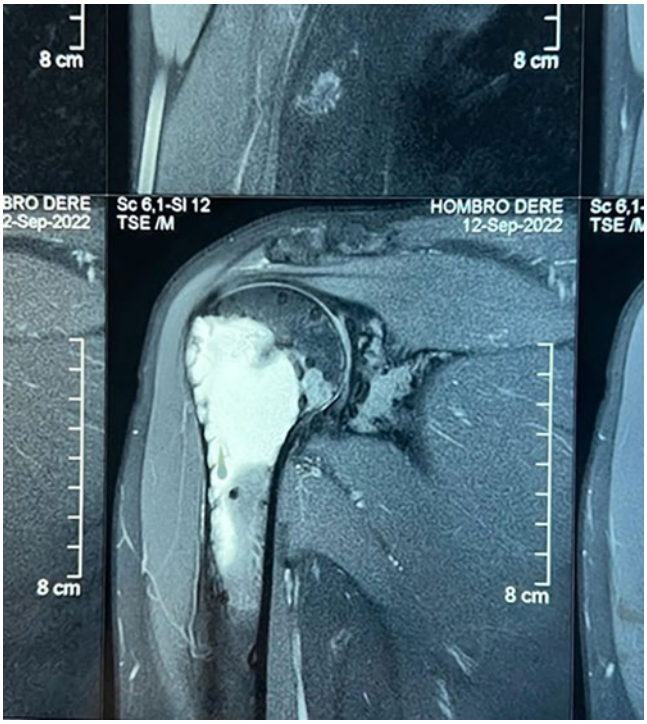



**Figure 3.** **Magnetic resonance imaging of the shoulder revealed an expansive lesion of 84 × 37 × 44 mm with an approximate volume of 68.3 cc, with irregular ridges, without evidence of cortical rupture or aggressive periosteal reaction or extraskeletal invasion. There was also evidence of sclerotic lesions in the humeral head, scapula, and clavicle.**

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