

PROBLEM



>>A 42-year-old man presents to the ED with pain and tenderness in the fifth finger of his right hand after minimal trauma. A posteroanterior radiograph of the hand is obtained (Figure 1).

What is your diagnosis?

Turn page for answer >>

ANSWER

>>The radiograph demonstrates an expansile osteolytic lesion with a well-defined margin in the proximal phalanx of the little finger, with thinning of the cortex (asterisk, Figure 1a). There is linear lucency along the medial cortex, indicating a probable pathologic fracture (arrow, Figure 1a). An oblique view confirms the presence of a fracture line through the radiolucent lesion (arrows, Figure 1b). These findings are consistent with a pathologic fracture through an enchondroma.

Enchondromas are the most common benign osseous tumors of the hand, representing 35% to 65% of all benign hand tumors.¹ They develop from cartilaginous origin within bones; generally, the mature cartilage islands become separate from the growth zone cartilage. The tumors occur during the third and fourth decades of life; incidence in men and women is similar. The most frequently affected site is the fingers, especially at the proximal phalangeal segments. Although calcifications within the matrix of a chondroid lesion are common when the tumor occurs at other sites in the body, they are often absent in an enchondroma of the hand. The plain radiograph shown here demonstrates the typical presentation of the lesion: osteolytic with a well-formed cortical margin and the surrounding soft tissue uninvolved.¹ The differential diagnosis of a lytic lesion of the hand includes bone cysts and giant cell tumors. Rarely, metastatic disease may involve the fingers as well.²

Patients with an enchondroma of the hand are typically asymptomatic, but the decreased quality of bone in enchondromas may lead to chronic pain or, as in the case presented, pathologic fracture.³ It is recommended that pathologic fractures through enchondromas of the hand be treated surgically to guarantee healing and mechanical stability. However, unlike enchondromas at other sites throughout the body, those of the hand do not appear to have a predilection for malignant transformation.

REFERENCES

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3. Morii T, Mochizuki K, Tajima T, Satomi K. Treatment outcome of enchondroma by simple curettage without augmentation. *J Orthop Sci.* 2010;15(1):112-117.

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