

Rheumatology Quiz

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A 60-year-old male presented with a 1-month history of severe bone pain in the fingers and legs, worse at night, and unintentional weight loss. The examination showed digital clubbing without arthritis. The X-ray is shown in Figures 1 and 2.

1. What unique features can you observe?
2. What is the diagnosis?



Figure 1 Film both hands AP view



Figure 2 Film both legs AP view

Answers

1. Plain X-ray findings:
Figure 1. Film both hands AP view: Linear periosteal reactions along the proximal phalanges, and distal ulnas. Normal joint spaces. No evidence of erosion.
Figure 2. Film both legs AP view: Multilayered linear periosteal reactions along the diaphysis of the bilateral fibulae.
2. Diagnosis: Hypertrophic Osteoarthropathy (HOA)

Short Review

Hypertrophic osteoarthropathy (HOA) is a syndrome characterized by abnormal proliferation of the skin and osseous tissues in the distal extremities, with the main clinical features including digital clubbing, arthralgia or arthritis, and periostitis of tubular bones.¹ HOA is classified into primary (a rare genetic form) and secondary forms, with secondary HOA frequently associated with paraneoplastic syndromes, particularly non-small cell lung cancer, as well as other pulmonary, cardiac, gastrointestinal, and endocrine diseases. Common secondary causes include lung cancer (adenocarcinoma), chronic pulmonary infections (e.g., tuberculosis, abscess), bronchiectasis, cyanotic congenital heart disease, chronic liver disease, inflammatory bowel disease, and rare conditions like thyroid acropachy.² Diagnosis is based on clinical findings, such as digital clubbing and radiographic evidence of periosteal new bone formation, particularly at diaphysis of long bone³, as there are no specific serologic tests. Initial investigations include imaging studies (plain radiograph and chest CT) and blood tests (e.g., ESR, CRP, alkaline phosphatase) to evaluate systemic inflammation and bone turnover. Management focuses on treating the underlying cause in secondary HOA (e.g., lung cancer or chronic infections) and providing symptomatic relief with NSAIDs or corticosteroids for pain and inflammation, while bisphosphonates may be used in refractory cases to decrease bone turnover and control pain. Primary HOA is treated symptomatically.⁴ Early identification and treatment of secondary causes, especially malignancies, are important for improving outcomes, with regular follow-up through imaging and symptom monitoring necessary to assess disease progression or resolution.

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Reference

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