Acroosteolysis in a Patient with Systemic Lupus Erythematosus

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Introduction

Acroosteolysis is the progressive resorption of bone in the distal phalanges of the hands and feet, often associated with digital ischemia, calcinosis, and neuropathy. The following case describes the extremely rare finding of acroosteolysis in a patient with systemic lupus erythematosus (SLE).

Case Description

A 53-year-old male was first diagnosed with SLE in 1994 after presenting with fever, night sweats, and severe thrombocytopenia with blood tests positive for ANA and dsDNA. He remained stable on hydroxychloroquine for many years with episodic mild joint pain in the bilateral hands.

In 2020, he reported tenderness at the fingertips with slowly progressive flattening of the fingernails and widened fingertips of the 1st-3rd digits bilaterally. He denied skin changes, cold sensitivity, neuropathy, or joint swelling. On exam, there was discoloration of multiple nail beds and pseudoclubbing. He had full range of motion of all digits, normal sensation throughout, and brisk capillary refill. Labs showed stable ds-DNA at 144 IU/mL. ESR, C3, and C4 were normal. Scleroderma panel was negative. X-rays of the hands were significant for osteolysis of the distal phalanges of the 1st through 3rd digits bilaterally.

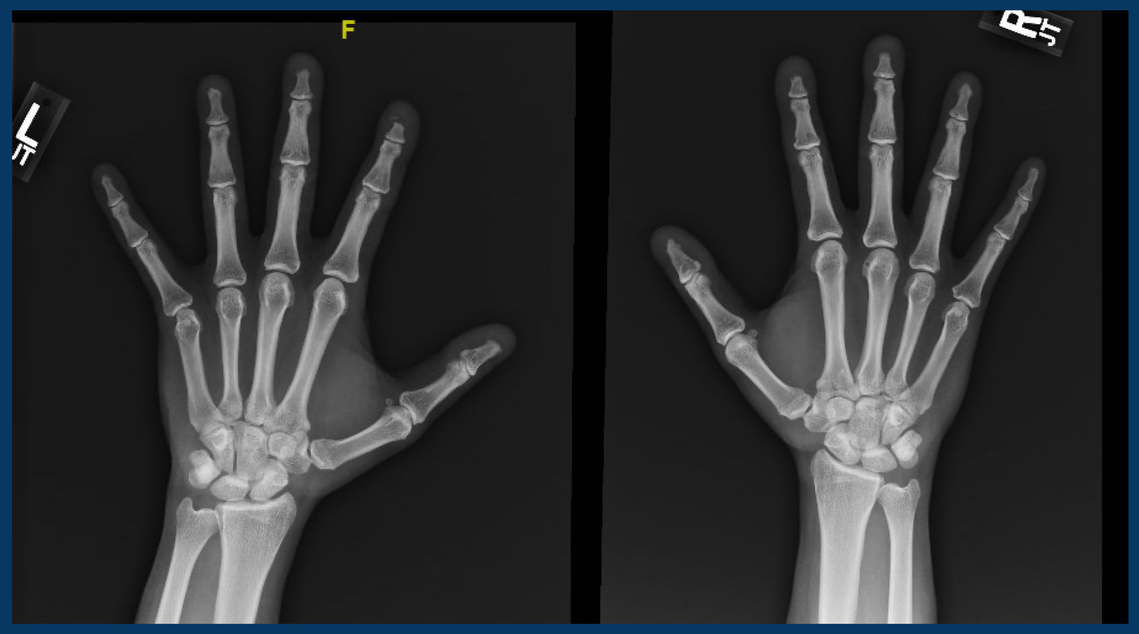

Fig 1. Bilateral X-rays of hands showing resorptive bone changes of the distal phalanges in the 1st through 3rd digits bilaterally.

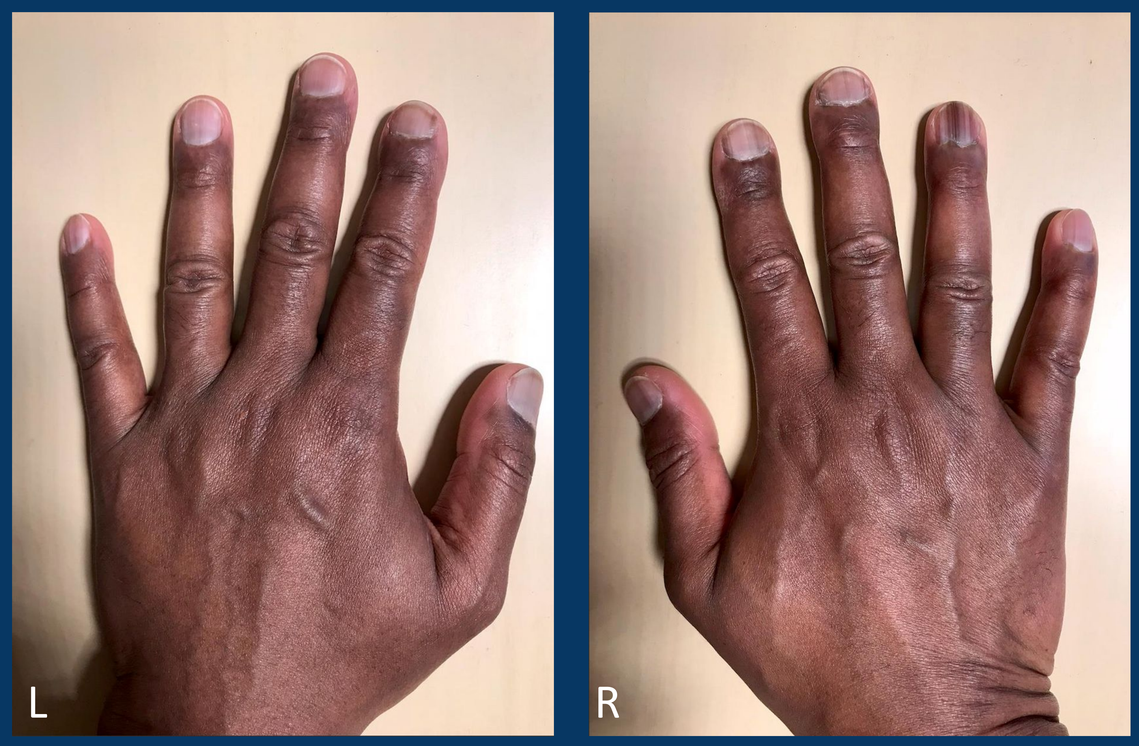

Fig 2. Photographs of dorsal hands showing nail discoloration and flattening of nail beds.

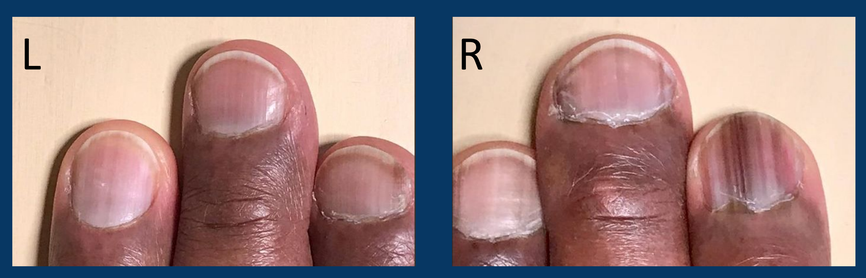

Fig 3. Close-up photographs showing pseudoclubbing of nails with dark striated discoloration prominent on the fingernail of the right 4th digit.

Discussion

Joint involvement is one of the most common findings in SLE and classically presents with arthralgias, synovitis, and morning stiffness characterized by symmetric involvement of the small joints. Bony erosions or deformities are atypical.

Acroosteolysis is an extremely uncommon finding in SLE and to date has been described in only two case reports. The etiology of acroosteolysis is unknown but it is associated with a variety of systemic inflammatory conditions, infections, and endocrine disorders. Associated rheumatic disorders include systemic sclerosis, psoriatic arthritis, mixed connective tissue disease, and Raynaud phenomenon. Diagnosis is made by plain radiographs showing either resorption at the terminal tuft or a linear pattern of resorption at the distal phalanx.

References

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