Bone Resorption in Systemic Sclerosis (Scleroderma)

GREGORY W.H. CHOY, MD, FRCPC, Rheumatology Resident; SAMAR AL-EMADI, MD, FACP, FRCSP, Rheumatology Resident; PETER LEE, MD, FRCPC, FRACP, Professor of Medicine, University of Toronto, and Mount Sinai Hospital, Lebovic Building, Room 2-004, 60 Murray Street, Toronto, Ontario M5G 1X5, Canada. Address reprint requests to Dr. Lee.

A 59-year-old man presented at the age of 38 years with diffuse skin thickening, Raynaud's phenomenon, and arthralgia. Other manifestations of his systemic sclerosis (SSc) included dysphagia, heartburn, calcinosis, telangiectasia (Figure 1) and interstitial lung disease, with normal lung volumes but a markedly reduced DLCO (37% of predicted). He was positive for both antinuclear and anti-topoisomerase-1 antibodies. Initial treatment consisted of penicillamine and low dose prednisone. There was progressive regression of his skin thickening, but gradual, painless shortening of his fingers was noted over a period of several years (Figure 2). Hand radiographs revealed the presence of a destructive arthropathy and extensive resorption of the middle and distal phalanges (Figure 3). Resorption of the distal phalangeal tufts is considered the characteristic radiological finding in SSc[1], but bony resorption involving other sites has been described including

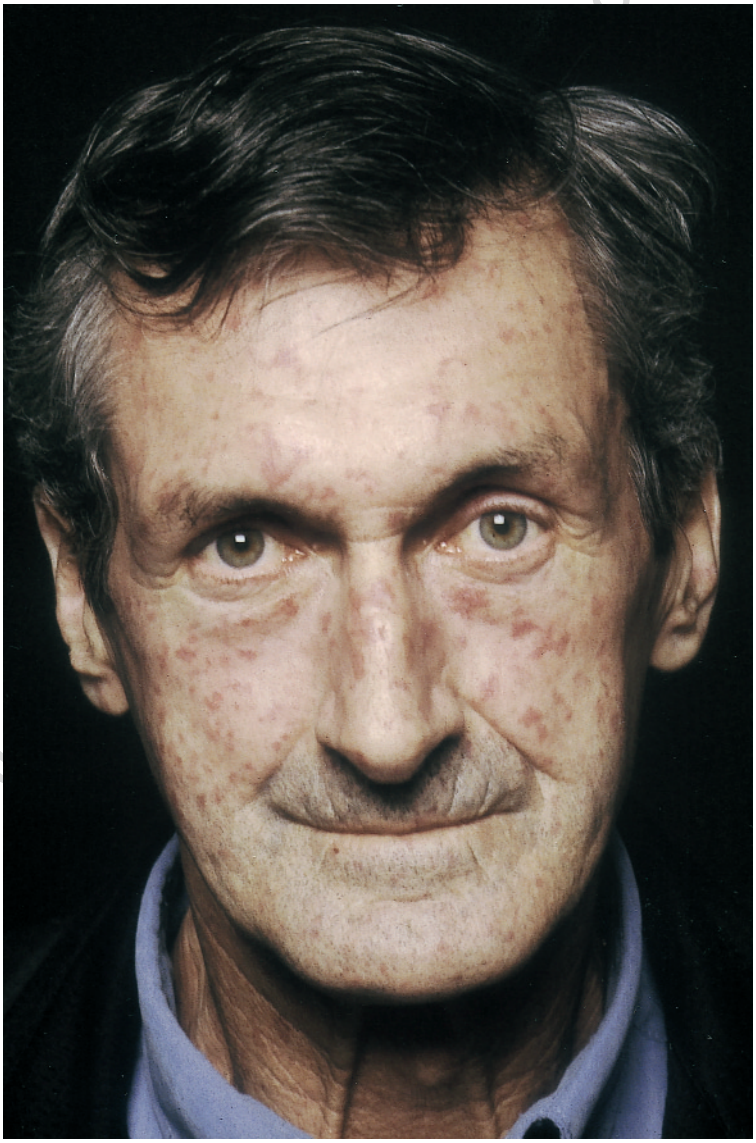

Figure 1. Prominent facial telangiectasia.

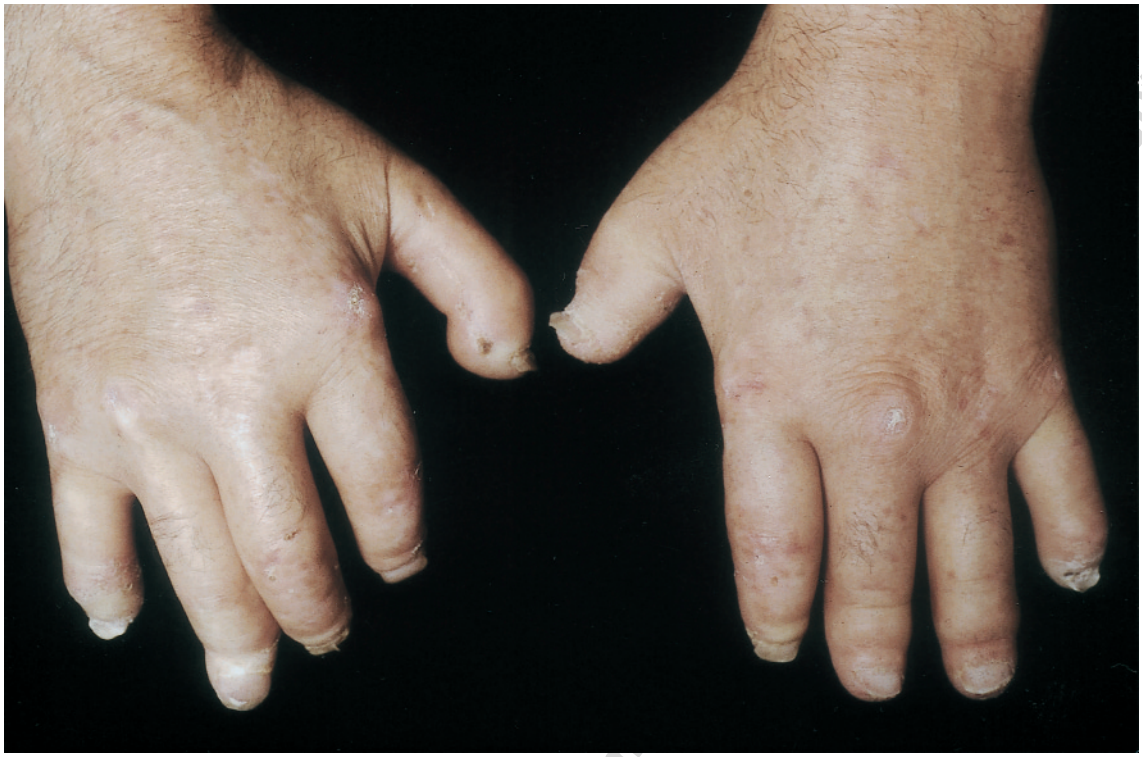

Figure 2. Marked shortening of the fingers in both hands.

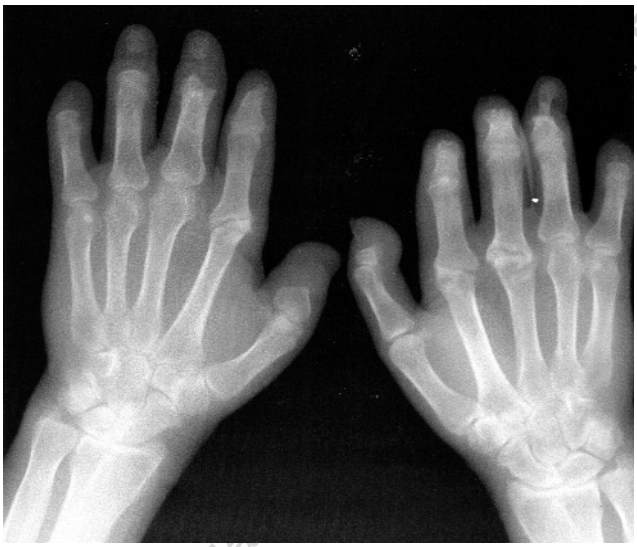

Figure 3. Radiograph of the hands showing destructive arthropathy and extensive resorption of the middle and distal phalanges.

the mandible and peripheral joints[2,3]. However, extensive resorption of the phalanges resulting in shortening of the fingers, as in this case, has not previously been described. The mechanism of this bone resorption is unknown.

REFERENCES

1. Blocka K. Organ involvement: Musculoskeletal. In: Clements PJ, Furst DE, editors. Systemic sclerosis. Baltimore: Williams and Wilkins; 1996: 409-24.
2. Baron M, Lee P, Keystone EC. The articular manifestations of progressive systemic sclerosis (scleroderma). Ann Rheum Dis 1982; 41:147-52.
3. Wood RE, Lee P. Analysis of oral manifestations of systemic sclerosis (scleroderma). Oral Surg Oral Med Oral Pathol 1988; 65:172-8.