Clinical vignette

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Digital ulcers and acro-osteolysis in mixed connective tissue disease

A 29-year-old man presented to our institution with painful fingertip ulcers. He was diagnosed with MCTD based on a 2-year history of Raynaud's phenomenon, swollen hands, symmetrical polyarthritis of the small joints of the hands and wrists, and positive antinuclear (1:2560, speckled pattern) and anti-RNP (80 U/ml, normal value <15 U/ml) antibodies. Anti-centromere and anti-Scl-70 antibodies were negative. Upon physical examination, he had sclerodactyly, shortened distal phalanges of index and middle fingers, bilateral palmar retraction and fingertip ulcers (Fig. 1A and B). Radiography of the hands (Fig. 1C) showed bone resorption of the distal phalanges. Nailfold capillaroscopy revealed an active SSc pattern (Fig. 1D). Acro-osteolysis or bone resorption of the distal phalanges of the hands and feet is observed in various disorders, such as SSc, psoriatic arthritis, hyperparathyroidism, leprosy, exposure to polyvinyl chloride and genetic disorders, among others [1]. MCTD, a disease with overlapping features of SSc, SLE and PM/DM, can also be associated with resorption of distal phalanges [1]. As in SSc, the occurrence of acro-osteolysis in MCTD is associated with severe digital ischaemia due to small vessel damage and decreased capillary density, leading to an impaired blood flow that may cause the terminal tuft resorption [2].

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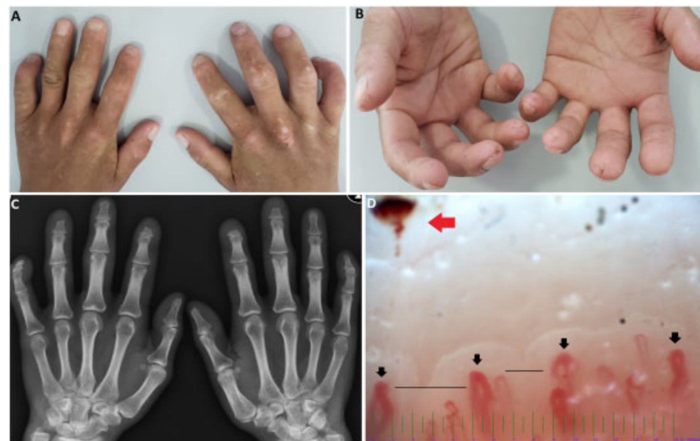
Fig. 1 Clinical, radiological and capillaroscopic features in patient with MCTD who developed acro-osteolysis



(**A**) Sclerodactyly, shortening of distal phalanges of index and middle fingers. (**B**) Bilateral palmar retraction and fingertip ulcers. (**C**) X-ray of the hands showing bone resorption of the distal phalanges, involving the terminal tufts. (**D**) Nailfold capillaroscopy revealing decreased number of capillaries, giant capillaries (open arrows), avascular areas (lines) and microhaemorrhages (red arrow) consistent with an active SSc pattern.

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