Tender Lesions on Fingertips

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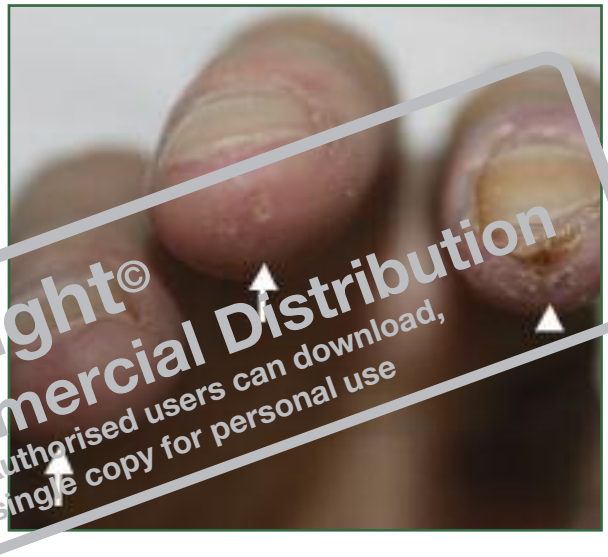
A 53-year-old smoking Caucasian man is admitted to the medical teaching unit. A complete physical examination reveals tender lesions on the tips of the patient's fingers. These lesions vary from slight depressions in the epidermis (arrow) to a healing ulceration with dry, scaling skin (arrowhead). The patient has a systemic disease known to manifest with this physical finding.



What is your Diagnosis?

This patient exhibits digital pitting scars and ulceration secondary to underlying limited cutaneous systemic scleroderma (SSc). SSc is a connective tissue disease with dysfunction of the immune system and microvasculature with associated multisystem involvement. Among the most prevalent abnormalities is endothelial impairment with fibrosis and luminal narrowing of the microvasculature, which leads to increased collagen deposition and thickening of the overlying skin and other involved organs. The most recognizable and nearly universal feature of the microvasculature involvement is Raynaud's phenomenon – or vasospasm leading to digital hypoxia and ischemia. Among patients with SSc, one third will subsequently develop digital lesions. These can range in presentation from a pitting scar, ulceration, gangrene, and bone and soft tissue infection to auto-amputation. Digital lesions in patients with SSc can occur on fingers or toes, most commonly appearing on the digital tips. These lesions cause local pain and function impairment, and can have a negative impact on patient quality of life, and may even result in permanent disability.

Treatment targets several aspects of SSc-associated digital lesions, including smoking cessation, pain relief, restoring hand function, improving digital microcirculation, treating and preventing infection with antibiotics and surgical debridement, and augmenting the healing of existing digital lesions while preventing their recurrence, as well as the formation of new lesions. There is evidence supporting the utilization of several different classes of agents in preventing formation of new digital lesions, including nifedipine (a dihydropyridine calcium channel blocker), iloprost (a prostacyclin analogue), sildenafil (a selective phosphodiesterase inhibitor), and bosentan (a dual endothelin receptor antagonist). There is also evidence that iloprost and sildenafil help to heal existing digital ulcers. Systemic corticosteroids are generally avoided, as they may precipitate scleroderma renal crisis. These patients should be referred to a rheumatologist.

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