Infected Calcinosis of the Knee in Limited Cutaneous Systemic Sclerosis

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Calcinosis is a fairly common complication of systemic sclerosis (SSc) and a major cause of morbidity. Sometimes, surgical intervention is indicated.

A 41-year-old woman with limited cutaneous SSc (lcSSc) presented with pain and erythema of the anterior aspect of the right knee, and a blistering lesion filled with white colored fluid (Figure 1A). She had known calcinosis of the right knee. Her temperature was 37.4°C. Her 8-year history of SSc was characterized by severe Raynaud's phenomenon with digital ulceration, skin thickening of the extremities, upper gastrointestinal involvement, and a positive anticentromere antibody. Extensive calcinosis was apparent on plain radiography (Figure 1B). With the clinical suspicion of infection, needle aspiration of the blister was performed to obtain microbiological specimens. Gram staining demonstrated gram-positive cocci (Figure 1C), identified as *Staphylococcus aureus*. Alizarin preparation revealed apatite spherulites indicating calcium-containing particles (Figure 1D). Despite appropriate targeted intravenous antimicrobial therapy the patient required surgical debridement of the infected tissue to achieve resolution.

Calcinosis occurs in 20%–40% of patients with lcSSc[1], but may also occur in the diffuse subtype. Infection of calcinosis in SSc is an underreported phenomenon, but causes major morbidity including pain and sometimes septicemia. This case reminds the clinician of the varied clinical manifestations and complications of SSc, including calcinosis. Despite interest in a small number of treatment strategies[2,3,4], there is currently no effective "disease-modifying" treatment. The mainstay of current management is early

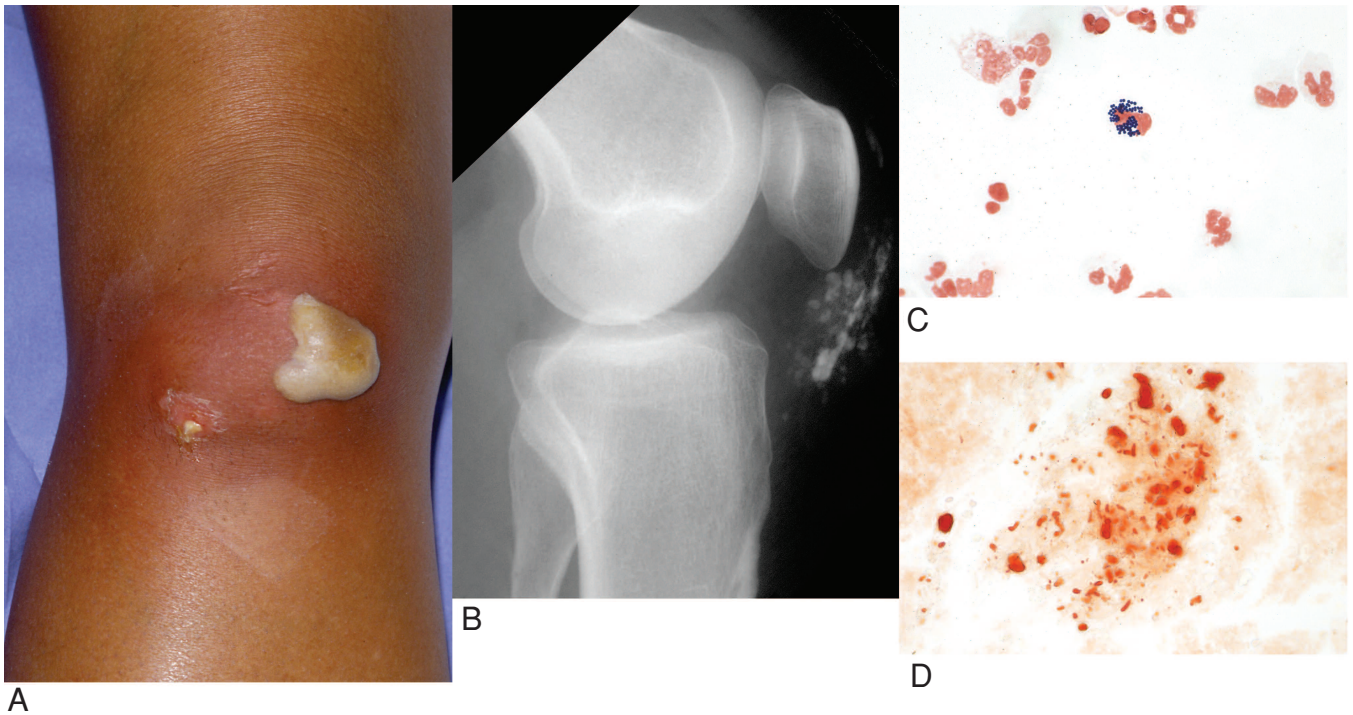

Figure 1. A. Right knee showing blistering lesion. B. Lateral radiograph of right knee showing extensive calcinosis. C. Gram stain showing gram-positive cocci identified as *S. aureus*. D. Alizarin preparation reveals apatite spherulites indicating calcium containing particles. Copyright Salford Royal NHS Foundation Trust; reproduced with permission.

treatment of secondary infection, and surgical debulking in selected cases.

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