Infectious Tenosynovitis in a Patient with Dermatopolymyositis and Vasculitis

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Flexor tendon sheath infection calls for appropriate antimicrobial and surgical therapy to overcome complications such as deep abscesses, septic arthritis, and osteomyelitis.

A 33-year-old woman with dermatopolymyositis and vasculitis for 1 year was diagnosed by typical rash (heliotrope rash, Gottron's sign), symmetric proximal muscle weakness, elevated serum skeletal muscle enzymes, electromyographic abnormalities, and interstitial lung disease. She started intravenous (IV) methylprednisolone 1 g/day for 3 days, followed by monthly IV cyclophosphamide and oral prednisone 1 mg/kg/day. After 2 months, the right fourth finger exhibited painful erythematous bullous lesions (Figure 1a, arrows). She did not present any systemic symptoms. Laboratory examinations showed white blood cell count 4900 and C-reactive protein 0.07 mg/dl. Sagittal (Figure 1b) and axial (Figure 1c) T1-weighted, gadolinium-enhanced magnetic resonance imaging (MRI) scans with fat saturation sequences showed extensive fluid collection with peripheral contrast enhancement of the fourth flexor tendon synovial sheath, indicating abscess (Figure 1b, 1c, arrows). Following fluid drainage 3 days after MRI, infectious tenosynovitis was confirmed and multisensitive *Staphylococcus aureus* was isolated. After 4 months of treatment, bullous lesions were completely resolved, without any sequela.

Tenosynovitis has been described in adult-onset dermatopolymyositis involving the hand, especially in patients with skin ulcers and calcinosis, and can cause recurrent extensor tendon rupture[1]. Causes of flexor tendon sheath infection (most commonly *S. aureus*, *Streptococcus* species) must be diagnosed, and appropriate medical or surgical treatment undertaken, to avoid poor clinical outcomes[1,2,3]. Treatment involves antimicrobial therapy, immobilization, edema control, and appropriate surgical therapy to prevent complications such as deep abscesses, septic arthritis, and osteomyelitis[2,3].

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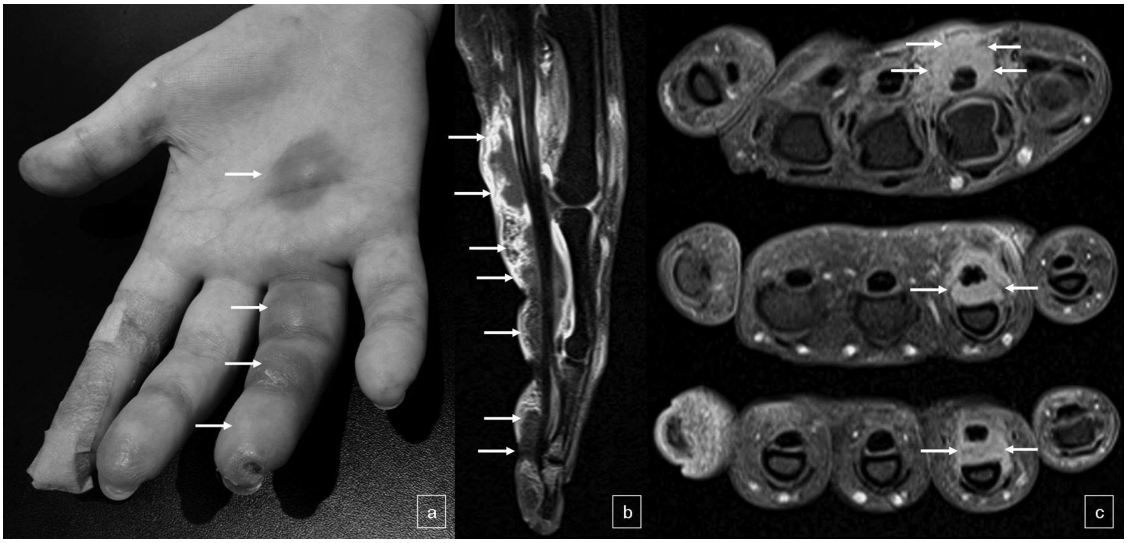

Figure 1. A. The right fourth finger exhibited erythematous bullous lesions (arrows). B and C. Magnetic resonance imaging scans showed extensive fluid collection with peripheral contrast enhancement of the fourth flexor tendon synovial sheath, indicating abscess (arrows).