Sporotrichosis with Bone and Joint Manifestations: A Diagnostic Challenge

Esporotricose com Manifestações Ósseas e Articulares: Um Desafio Diagnóstico

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Palavras-chave: Artrite Infecciosa/diagnóstico por imagem; Esporotricose/diagnóstico por imagem; Ressonância Magnética; Sporothrix

Dear Editor,

Sporotrichosis is a chronic infectious disease caused by fungi of the *Sporothrix schenckii* complex, which includes four clinically relevant species: *S. schenckii* sensu stricto, *S. brasiliensis*, *S. globosa*, and *S. luriei*. These fungi thrive in decomposing plants and soil, thriving in tropical and subtropical climates. Between 1998 and 2015, the Oswaldo Cruz Foundation (Fiocruz) reported about 5000 human and 5100 feline cases of sporotrichosis in Brazil. Transmission typically occurs through bites or scratches from infected cats, particularly those carrying the *S. brasiliensis* strain.[1]

We report the case of a 41-year-old man from Belo Horizonte, Brazil, who experienced severe pain in his right ankle and foot for six months. Before that, he had been working as a painter on a farm and developed wounds on his right foot. He reported having diabetes *mellitus* and denied other comorbidities or previous surgeries. Physical examination revealed swelling in the right ankle and foot, with limited movement involving the tibiotalar joint. His C-reactive protein (CRP) level was 124 mg/dL. Magnetic resonance imaging (MRI) of the ankle revealed bone deformities, edema, and signs of joint infection (Fig. 1). Percutaneous aspiration and fungal culture confirmed infection with *Sporothrix schenckii*, verified by CRP. The treatment involved draining the subcutaneous collections, administering amphotericin B (5 mg/kg daily administered intermittently over a total period of four weeks as induction therapy). This was followed by oral itraconazole (100 mg twice daily for two years). During treatment, the patient underwent two surgeries – one for joint debridement and antifungal cement placement, and another one 45 days later for joint arthrodesis and cement removal. The patient now experiences lasting joint swelling and pain when placing weight on his foot.

Globally, sporotrichosis primarily affects children, women, and the elderly, who often have increased contact with infected cats.[2] Osteoarticular sporotrichosis, although rare, accounts for 3% - 4% of cases and is the third most commonly affected area, following skin and mucosal involvement.[3] Immunosuppressed patients are at higher risk for severe forms, including hematogenous dissemination and multifocal bone lesions.[4] Severe infections can progress to sepsis and death. The differential diagnosis includes other synovial proliferation disorders that may present with similar symptoms and lesions, such as other atypical infections (including tuberculosis), rheumatoid arthritis, pigmented villonodular synovitis, hemophilia, and synovial chondromatosis.[5] Early and accurate diagnosis is crucial. Magnetic resonance imaging is considered the gold standard for assessing soft tissue and joint changes, while computed tomography is useful for evaluating bone and joint lesions.[3]

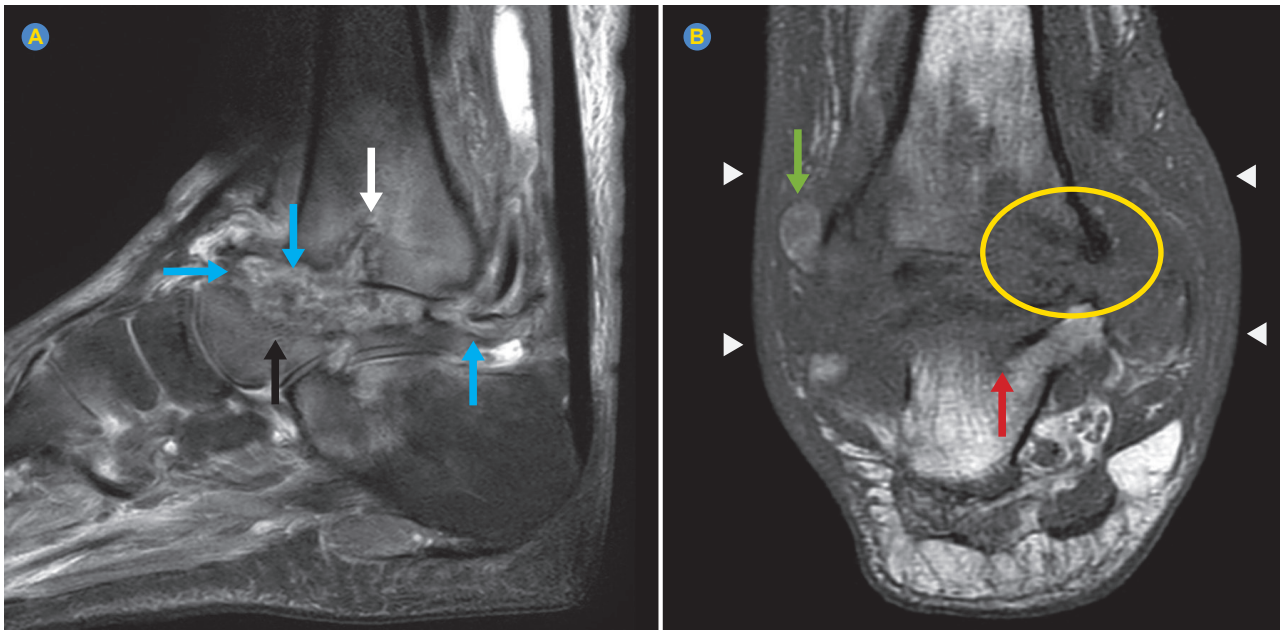

Figure 1 – Magnetic resonance imaging DP SPAIR in sagittal section (A) and T1-weighted image in coronal section (B) of the right ankle demonstrating marked deformity with erosions and significant edema of the dorsal portion of the talus bone (black arrow). Erosions with significant edema in the distal and articular portion of the tibia with communication with the medullary collection (white arrow). Marked deformity and volumetric reduction of the medial malleolus (yellow circle). Deformity with erosions and significant edema of the dorsal portion of the calcaneus bone (red arrow). Fluid effusion with significant synovial thickening in the tibio-talar joint space and in the anterior and posterior tibio-talar recesses (blue arrows). Significant edema of the subcutaneous tissue (arrowheads) with associated abscess (green arrow).

Treatment generally involves itraconazole, with alternatives such as terbinafine, potassium iodide, and amphotericin B for severe cases.[5]

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AUTHOR CONTRIBUTIONS

All authors contributed equally to this manuscript and approved the final version to be published.

PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in October 2024.

DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

PATIENT CONSENT

Obtained.

COMPETING INTERESTS

The authors have declared that no competing interests exist.

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