

# Atypical manifestation of cutaneous sporotrichosis: case report

## Abstract

Sporotrichosis is a subcutaneous mycosis caused by dimorphic fungi of the *Sporothrix schenckii* complex and considered endemic in Latin America. Clinical presentations depend on the characteristics of the fungus and the immunological competence of the host. We report the case of a 40-year-old woman with progressive and rapid appearance of multiple papules with central umbilication and crusts distributed on the back and immunocompetent. The culture was definitive for the diagnosis of the disease, revealing *Sporothrix* sp. The treatment was with Itraconazole 200mg/day and, although extensive, resulted in complete healing of the lesions. The polymorphism of the lesions and their anatomical extension generated difficulties in fitting it into the current clinical forms. A fact that, according to the literature, could mean a new clinical classification of the disease.

**Keywords:** Sporotrichosis, *Sporothrix schenckii* complex, subcutaneous mycosis, endemic, clinical presentation, *Sporothrix* sp

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## Introduction

Sporotrichosis is a subcutaneous infection, caused by dimorphic fungi of the genus *Sporothrix*. It occurs preferentially in tropical and subtropical regions, being considered the most frequent subcutaneous mycosis in Latin America, where it is Endemic.<sup>1,5</sup> Its transmission occurs through traumatic inoculation in the skin or mucous membranes by plants, soil, decaying vegetation or animal biting and scratching contaminated (rats, armadillos, cats and dogs). The metropolitan region of Rio de Janeiro is hyperendemic for cat-associated sporotrichosis, mainly due to the *Sporothrix brasiliensis*.<sup>2,4</sup> Clinical manifestations include the fixed cutaneous form, with a single lesion, lymphocutaneous, with involvement of the lymphatic pathway, is disseminated, in more than one skin segment by multiple inoculations or dissemination hematogenic. Most zoonotic sporotrichosis cases typically present with the well-known fixed or lymphocutaneous lesions. However, atypical manifestations have been reported in hyperendemic regions, often leading to worse prognoses.<sup>10</sup> Notable atypical presentations include mucosal involvement, hypersensitivity reactions (HRs), osteoarthritis, and pulmonary or meningeal involvement. Among *Sporothrix* species, *S. brasiliensis* is more frequently associated with atypical clinical manifestations than the sapronotic species *S. schenckii* and *S. globosa*.<sup>6,7,11</sup> Severe atypical presentations of sporotrichosis are often associated with comorbidities, such as AIDS, alcoholism, chronic obstructive pulmonary disease, or diabetes.<sup>12</sup> The diagnosis has direct examination as its gold standard, and as histology, serology and molecular tests.<sup>6,7</sup> The treatment of choice is the itraconazole, with a choice of terbinafine, amphotericin B, and iodide solution potassium.<sup>8,9</sup>

## Report of the communication

A 39-year-old female patient, born in Ceará and coming from the Rio de Janeiro January, reports the appearance of an erythematous papule on the dorsum, an erythematous papule with burning sensation and itching sensation in the left scapular region, for 9 months, with rapid and progressive appearance of new adjacent lesions with drainage of purulent discharge. During this time, he sought medical attention for several times, without improvement. We performed an incisional biopsy, with a histopathological report, culture and micromorphology compatible with sporotrichosis. No changes to the chest X-ray, serology and laboratory tests. The treatment was done

with Itraconazole 200mg-day with lesion remission in 1 year, leaving aspects Peculiar scars.

## Discussion

Sporotrichosis is a subacute or chronic infection caused by the saprophytic dimorphic fungus *Sporothrix schenckii*. Traditionally considered a single-species disease, phenotypic and genetic analyses have since identified multiple species within the *Sporothrix* genus. The condition typically presents with slow-progressing nodular or nodulo-ulcerative lesions arranged in a linear distribution. To the best of our knowledge, bizarre and atypical presentations of sporotrichosis in immunocompetent individuals are rare. In our patient, the dissemination of the infection can be most plausibly explained by multiple traumatic implantations. Additionally, it may be associated with more virulent species, such as *Sporothrix brasiliensis*, which is known to cause atypical chronic disseminated cutaneous manifestations. *S. brasiliensis* is considered the most virulent species due to its association with higher mortality rates, greater tissue burden, and more extensive tissue damage.

## Conclusion

We report a case of atypical clinical presentation of sporotrichosis, with challenges involving the inclusion of this cutaneous manifestation in the current classifications of the sporotrichosis, due to the large number of lesions, non-involvement of lymphatic involvement and restriction to the back, with emphasis on good therapeutic response. In addition, presenting a peculiar scar after resolution of the condition.<sup>3</sup>

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## Conflicts of interest

The author declares that there are no conflicts of interest.

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