

CUTANEOUS SPOROTRICHOSIS. REPORT OF A CASE WITH COMMENTS

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Summary

Background. Sporotrichosis is rarely encountered in European countries. We present a case of lymphocutaneous (lymphangitic) cutaneous sporotrichosis in an immuno-competent patient.

Case presentation. The 57-year-old patient is consulted for multiple, ulcerated nodular lesions arranged on the lymphatic pathway of the left upper limb. The patient works in Canada as a park ranger, coming into contact with soil and plants. Histopathological examination revealed deep granulomatous inflammation of epithelioid histiocytes and multinucleated giant cells in the deep dermis. Cultures in the Sabouraud environment identified colonies of *Sporotrix schenckii*. Oral treatment with itraconazole led to the healing of the lesions.

Discussion. The case presented is that of lympho-cutaneous sporotrichosis with a clinical characteristic appearance of layered nodules on the lymphatic trajectory of the drainage area of the spore inoculation site. The diagnosis of sporotrichosis is established by cultures performed on Sabouraud medium. The primary prevention of this anthrozoosis is based on wearing gloves in gardening, forestry or agricultural activities.

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Introduction

Sporotrichosis is a deep mycosis caused by a ubiquitous fungus *Sporotrix schenckii* described by Benjamin Schenck in 1898. The condition is found mainly in tropical areas, but also in temperate areas. Sporotrichosis comes in two clinical forms, cutaneous and rarely systemic. In the cutaneous form, the lymphocutaneous (lymphangitic) type is the most common. We present the case of an immunocompetent man with cutaneous sporotrichosis of the lymphocutaneous type who comes from a country with a temperate climate.

Case presentation

A 57-year-old Romanian patient settled in Canada was consulted for multiple nodular lesions located on the left upper limb. The patient

works as a park ranger, coming into contact with soil and plants.

Clinical examination revealed multiple, purplish, ulcerated, nodular lesions located on the lymphatic path of the left upper limb (Fig. 1, 2). The initial nodular lesion that appeared 10 weeks before the consultation was located on the dorsal face of the 5th finger of the left hand, followed by the appearance of new nodular lesions. No left axillary lymphadenopathy was seen. The patient was immunocompetent, HIV serology being negative.

Histopathological examination revealed deep suppurative nodular inflammation in the dermis with necrosis, cell debris, neutrophils, plasma cells and histiocytes, delimited by granulomas composed of aggregates consisting of epithelioid histiocytes and multinucleated giant cells (Fig. 3, 4, 5). Ziehl and PAS staining did not show the

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Figura 1. Sporotricoză cutanată: nodul violaceu.



Figura 2. Sporotricoză cutanată: noduli violacei cu localizare limfatică membru superior stâng.

presence of any infectious agent. Cultures in the Sabouraud medium identified colonies of *Sporotrix schenckii*. Treatment with itraconazole 200 mg/day for 3 months led to the healing of the lesions.

Discussion

Sporotrix schenckii is a dimorphic fungus that lives saprophytically in the soil, plants and water. It can affect miners, agricultural workers, forestry workers, gardeners. It can also infect animals

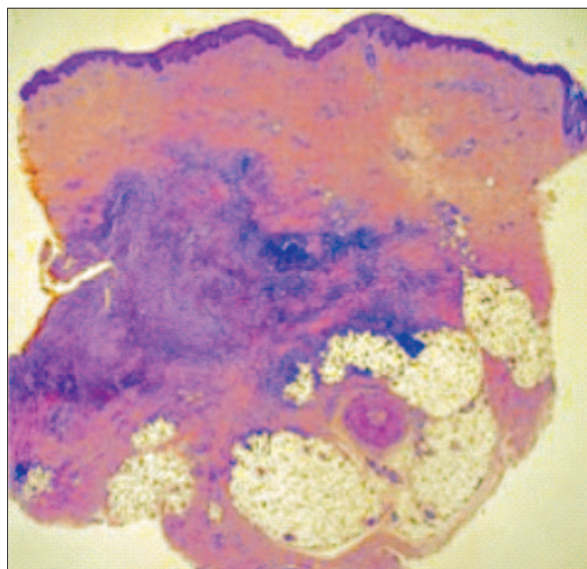


Figura 3. Examen histopatologic din biopsia unui nodul, colorație HE, x40.

such as cats. In cutaneous sporotrichosis, the contamination is caused by a skin or mucous membrane burst due to for example minor trauma resulted from a sting with a spine or splinter. In the rare cases of systemic sporotrichosis, the portal of entry is inhaling with the initial damage to the lung and later the possibility of affecting other organs. The incubation period is between 8 and 30 days.

Cutaneous sporotrichosis has two main types: lymphocutaneous (lymphangitic) and localized, and can consist in atypical skin types such as mycetoma or cellulite. The lymphocutaneous type is the most common, the lesions appearing on the lymphatic drainage path of the spore inoculation site. The usual location is on skin areas unprotected by clothing and exposed to trauma, especially on the upper limbs. The onset is in the form of a nodule or a pustule that appears at the site of inoculation of the spores and that ulcerates in evolution. In the absence of treatment, the evolution is chronic, with the appearance of new stage nodules along the drainage area. The nodules appear within a few days with a tendency to ulcerate [1, 2]. This clinical aspect is known as "sporotrichoid dissemination", which can be seen in other inoculation infections such as leishmania, chromomycosis or mycobacteriosis caused by *M.*

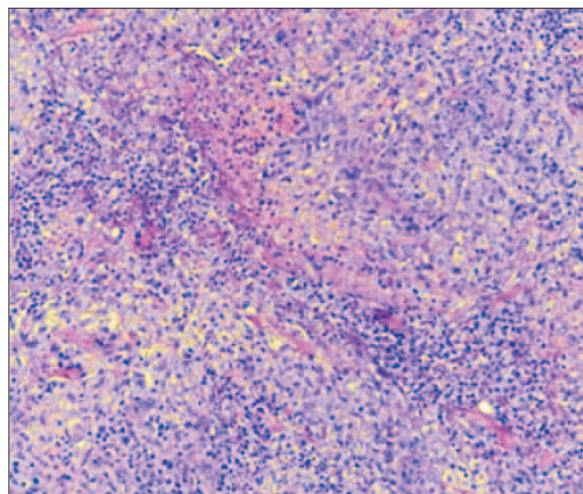


Figura 4. Examen histopatologic din biopsia unui nodul: reacție granulomatoasă și supurativă sporotrichoidă în dermul profund și țesutul adipos subcutanat, colorație HE, x100.

marinum. The general condition is good. In case of prolonged evolution, regional lymphadenopathy with the possibility of an abscess may occur. This type of lymphocutaneous sporotrichosis is

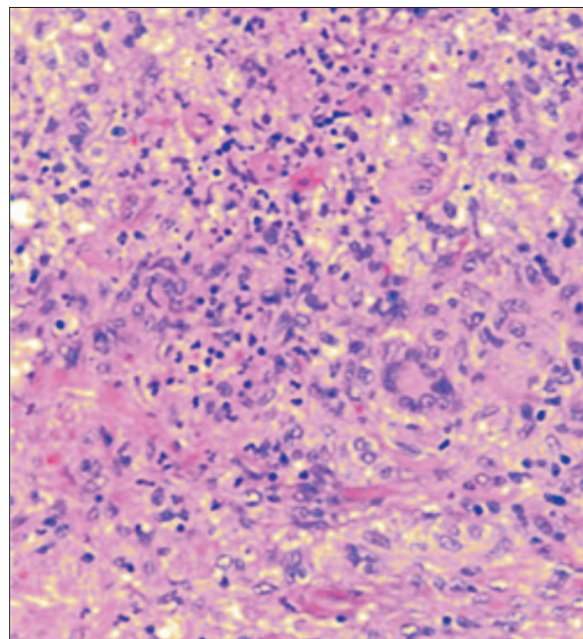


Figura 5. Examen histopatologic din biopsia unui nodul: reacție granulomatoasă și supurativă sporotrichoidă în dermul profund și țesutul adipos subcutanat, colorație HE, x200.

also found in the patient presented. The type of localized cutaneous sporotrichosis is less common, characterized by the pathogen remaining at the site of inoculation with the appearance of a more or less warty or vegetative erythematous nodule. The diffuse skin form is exceptional, being described in immunocompromised patients, with the possibility of affecting the internal organs, particularly the lungs and bones.

Histopathological examination reveals the presence in the deep dermis of granulomas formed by epithelioid histiocytes and giant cells, but also piles of neutrophilic polynuclear cells. To establish the diagnosis of sporotrichosis it is necessary to perform cultures of pus from skin lesions, scales, biopsy, and in systemic sporotrichosis from sputum or cerebrospinal fluid. Culture on the Sabouraud medium highlights *Sporotrix schenckii* colonies with the presence of drop or triangular macroconidia located around the mycelial filaments. The direct examination is of little importance, and if the appearance of the colonies is positive it is that of "corps en cigare" [3, 4].

The differential diagnosis of sporotrichosis is made with cutaneous leishmaniasis, other

mycoses (coccidiosis, histoplasmosis, cryptococcosis, chromoblastomycosis), mycobacteriosis (*M. marinum*, *M. tuberculosis*) and less frequently with bacterial infections (nocardiosis, tularococcus, staphylococcal or streptococcal infections) [4].

The treatment of choice is itraconazole in dosage which varies according to the clinical form [5]. Terbinafine with 83% efficacy or fluconazole with 75% efficacy [6, 7] may also be used. Potassium iodide administered orally in high doses is effective in the localized type of sporotrichosis. Treatment should be followed for 3-4 weeks after clinical cure. Treatment with itraconazole 200 mg/day for 3 months led to the clinical healing of the lesions in our case. In conclusion, although this condition remains very rare in temperate areas, the diagnosis of sporotrichosis should be evoked in the case of a suggestive clinical picture requiring mycological cultures. The primary prevention of this anthropozoonosis is based on the wearing of gloves in gardening, forestry or agricultural activities.

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Conflict of interest
NONE DECLARED

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