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Visual Diagnosis in Emergency Medicine

FACIAL CUTANEOUS SPOROTRICHOSIS IN A BOY

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CASE REPORT

An 11-year-old previously healthy boy, resident of Rio de Janeiro, Brazil, presented with a 3-week history of an asymptomatic ulcer on frontal region of the head. He reported having daily contact with a domestic cat that had several cutaneous lesions; however, he did not recall being scratched, licked, or bitten by a cat at the site of the ulcer. Positive findings on physical examination included a single ulcer over the frontal region measuring 2 cm × 3 cm with well-defined, erythematous borders, and a base covered with a gray-colored material (Figure 1). Lymphadenopathy was not present. A mycologic culture of the exudate of the ulcer was obtained in Sabouraud's dextrose agar at 28°C and 37°C, and mycelial and yeast growth forms were isolated, respectively (Figure 2). Culture microscopy of the mycelial form showed hyaline, septate, and branched hyphae with clusters of ovoid, denticulate conidia produced sympodially on short conidiophores forming "daisies" (Figure 3). The diagnosis of the fixed cutaneous form of sporotrichosis was confirmed and the patient was treated with itraconazole 200 mg/day. Ten days after the start of treatment and 40 days after the first lesion, the patient developed regional left pre-auricular lymph node involvement. Although there was a shift from the fixed cutaneous form to the lymphocutaneous sporotrichosis, the patient experienced progressive improvement of skin lesions and complete resolution was achieved 2 months after the onset of the condition.

DISCUSSION

Sporotrichosis is a subcutaneous mycosis caused by the thermally dimorphic *Sporothrix schenckii* species

Figure 1. Ulcer with raised borders and perilesional erythema in the frontal region of the face.

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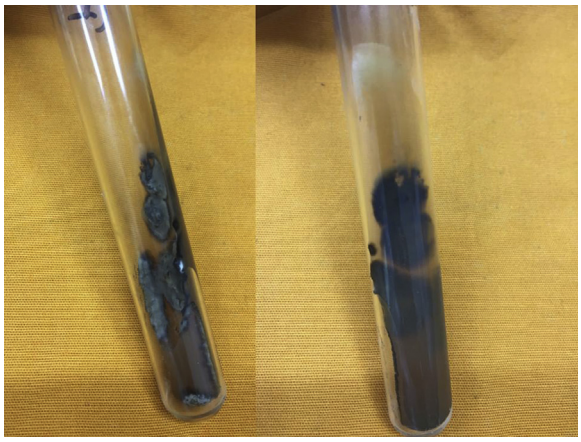

Figure 2. Positive culture of *Sporothrix spp.* on Sabouraud's glucose agar at 25°C. Obverse (left) and reverse (right): moist and cream color filamentous colony has turned brownish-black on further incubation.

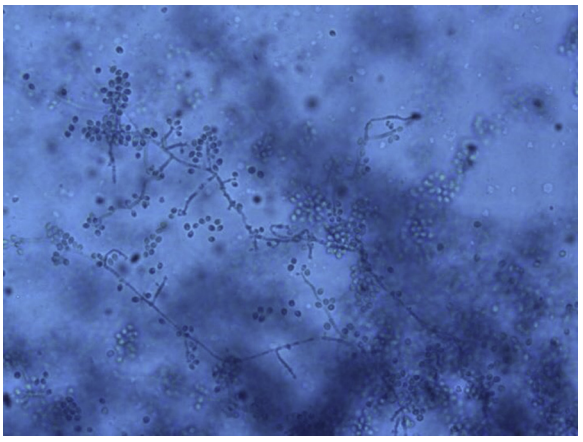

Figure 3. Photomicrograph of the fungus (400×). Its mycelial form is seen with typical conidiophores bearing conidia as a bouquet at the tip.

complex that contains several distinct species, including *S. brasiliensis*, *S. globosa*, and *S. schenckii* sensu strictu. It has a worldwide distribution, and may also cause systemic disease, particularly in immunosuppressed hosts (1,2). The usual mode of infection is from traumatic inoculation of soil, plants, and organic matter contaminated with the fungus (1,3). The zoonotic transmission of sporotrichosis was described sporadically involving accidents with snakes and birds, rat, horse, squirrel, insect stings, and fish handling (1). In Brazil, the cat plays a prominent role in zoonotic transmission of the disease and human sporotrichosis, with feline transmission representing a relevant public health concern in Brazil (2–5).

Through scratches, bites, and even sneezing or cough secretion, sick cats transmit the fungus to humans (6). In patients who do not remember experiencing trauma, unperceived injuries may have occurred while handling the pet (7). It is also part of cats' behavior to rub their faces against their handlers, to bite, and to scratch.

Several clinical forms of sporotrichosis are observed according to the size of the infective inoculum, fungal virulence, depth of inoculation, and immunological state of the host (1–3). The lymphocutaneous form of the disease is the most frequent variant, representing >70% to 80% of all cases (2,3). The fixed cutaneous form is characterized by different clinical manifestations, such as asymptomatic, erythematous, papulo-plaque, papulo-pustule, nodule or verrucous plaque, a non-healing ulcer, or a small abscess located on exposed areas where fungal inoculation occurred (1–4). Differential diagnoses include cutaneous tuberculosis, squamous cell carcinoma, cutaneous leishmaniasis, and pyoderma gangrenosum (8).

Itraconazole, saturated solution of potassium iodide, terbinafine, and amphotericin B are drugs for treating sporotrichosis (2,3). The first three are administered orally, while the last one is administered intravenously. Early diagnosis and treatment are essential to avoid the morbidity of the chronicity of this disease.

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