

Tinea faciae due to *Trichophyton soudanense*: first report in Argentina

María Rosa Elías Costa¹, Mariana Díaz² & Ana R. Kaminsky²

¹Centro de Micología, Departamento de Microbiología, Facultad de Medicina, Universidad de Buenos Aires y
²Hospital Durand, Cátedra de Dermatología, Facultad de Medicina, Universidad de Buenos Aires, Buenos Aires, Argentina

Summary We hereby report the first case of a *tinea faciae* infection due to *Trichophyton soudanense* in a 20-year-old female from Buenos Aires city, Argentina. This case illustrates the need to be aware of unusual agents and the importance of a proper mycological diagnosis.

Key words *Trichophyton soudanense*, *Tinea faciae*, Argentina

Primer aislamiento de *Trichophyton soudanense* de *tinea faciae* en la República Argentina

Resumen Presentamos el primer caso de infección por *Trichophyton soudanense* aislado de una lesión de cara de una joven de 20 años de edad, residente en la ciudad de Buenos Aires, Argentina. Este primer aislamiento en Argentina alerta sobre la posibilidad de aislar agentes etiológicos infrecuentes en nuestro medio y la importancia de solicitar la realización de exámenes micológicos necesarios para un diagnóstico apropiado.

Palabras clave *Trichophyton soudanense*, *Tinea faciae*, Argentina

Trichophyton soudanense is an anthropophilic dermatophyte described in Africa by Joyeux in 1912. This species has a geographical distribution restricted to the North-East of tropical Africa, particularly in Ghana, Cameroon, Mauritania, Nigeria, Sudan, Chad and Zaire, where most of the isolates from clinical lesions have been reported [2,6,18]. It is the most frequent etiological agent causing *tinea capitis* in children and young adults in this endemic area and in emigrants from Africa residing in Europe [15].

In the late 1950's, *T. soudanense* was identified, outside the African continent, especially in the United States of North America [14], Brazil, Australia [11] and Cuba [5], but the majority of the epidemiological reports came from European countries which had had African colonies [1,4,7,10,15]. We now present the first isolation of *T. soudanense* from a lesion of a *tinea faciae* in the República Argentina.

Clinical case. An otherwise healthy 20 year-old female from Buenos Aires (República Argentina), attended the dermatology consulting office because of a lesion on the face. She said that she had resided in Zambia, Africa for one year, where she worked in a rural area as an intern in a social assistance program and that three months before consulting the dermatologist, she noticed a lesion on her left cheek. She was first treated with antibiotics and topic corticosteroids without any improvement, so she decided to ask for another opinion. The dermatological examination revealed a patch of about 10 cm in diameter spreading from the left cheek to the lower and the upper part of the lids, also involving the lateral part of the nose. There was little itching and scaling and the edges were well defined. A dermatomycosis was suspected and a mycological study was prescribed (Figure 1). The sample was obtained by scraping the marginal edges of the lesion, 10 days after having suspended all treatment.

Micological diagnosis. The scales were cleared with a mixture of a 40% solution of KOH and Parker superchrome blue black ink in equal amounts, and with a solution of 20% of KOH with Calcofluor white (Fluorescent lightener 28, Sigma, USA). The two slide-mounts were observed under optical and epifluorescent microscope, respectively. Both examinations revealed the presence of hialine, tabicated and branched hyphae morphologically similar to dermatophytes (Figure 2).

The specimens were cultured in four tubes containing Sabouraud honey agar (honey 65 g, peptone 10 g, yeast extract agar 20 g, distilled water 1000 ml) and Lacrimel agar (skimmed milk 200 ml, honey 10 g, flour 20 g, agar 20 g, distilled water 800 ml) and were incubated at 28 °C for thirty days.

Address for correspondence:

M.R. Elías Costa
Centro de Micología
Departamento de Microbiología
Facultad de Medicina
Universidad de Buenos Aires
Paraguay 2155 CP 1121, Buenos Aires, Argentina
Tel. / Fax: +54 114 508 3708
Email: micologia@fmed.uba.ar

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The macroscopic examination in Sabouraud medium showed a slow-growing colony, flat to folded in the center of a tough leathery consistency, covered with a white and short aerial mycelia and fringed or ray-like radiating edges. The surface of the colony was of a yellow to apricot colour. The reverse was pigmented in deep yellow to salmon (Figure 3).

The microscopic examination in Sabouraud medium showed, after 25 days of incubation at 28 °C, the presence of hyphae strongly fragmented into arthroconidia, reflexive (backward) growing and right-angle branching mycelium. Macro and microconidia were not observed (Figure 4).

In the Lactrimel medium the colony had a velvety surface with a light cinnamon colour and showed folds from the center to the margins. After 25 days of incubation at 28 °C, it appears a darkish pigmentation on the reverse that diffused to the medium. The microscopic examination of the colony let us see a great number of chlamydoconidia arranged in chains, some of them having a brown colour.



Figure 1. Cutaneous lesion in tinea faciae.

The colonies grown in the Lowenstein Jensen medium (Britania Lab., Argentina) were dark covered with a short, velvety, grayish mycelium and had a black pigmentation diffusing to the medium on the reverse. Hairs perforating organs and urea tests were negative.

Based on the macroscopic and microscopic features and the negativity of the urea test and hair-perforating organs we identified the isolate as *T. soudanense*. The patient was medicated with itraconazole (200mg twice a day during 14 days) with a complete remission of the lesion.

Recently the European Confederation of Medical Mycology in a multicentric study, demonstrated a change in the clinical pattern of the lesions caused by dermatophytes and an increase in the number of unusual agents [9]. In many European countries, infections due to exotics agents such as *Microsporum ferrugineum*, *Microsporum audouinii*, *Trichophyton violaceum* and *T. soudanense* have been more frequently detected. [3,12,13,16].

Tinea capitis is undoubtedly the most frequent manifestation of *T. soudanense* in children and young

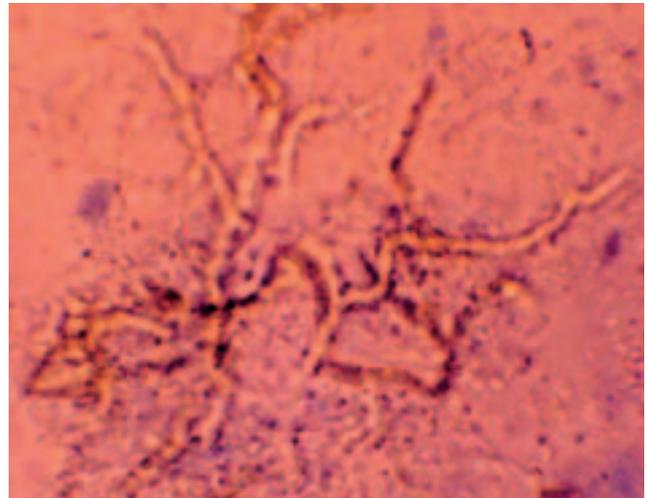


Figure 2. Microscopic examination of the scales treated with potassium hydroxide plus Parker blue black ink.

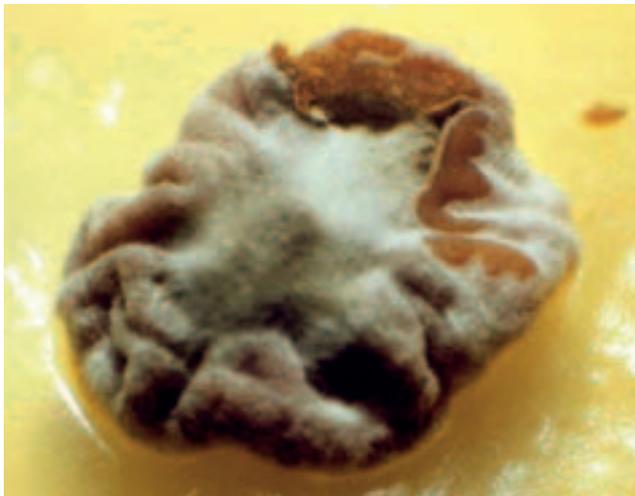


Figure 3. Macroscopic appearance of the giant colony in Sabouraud agar.

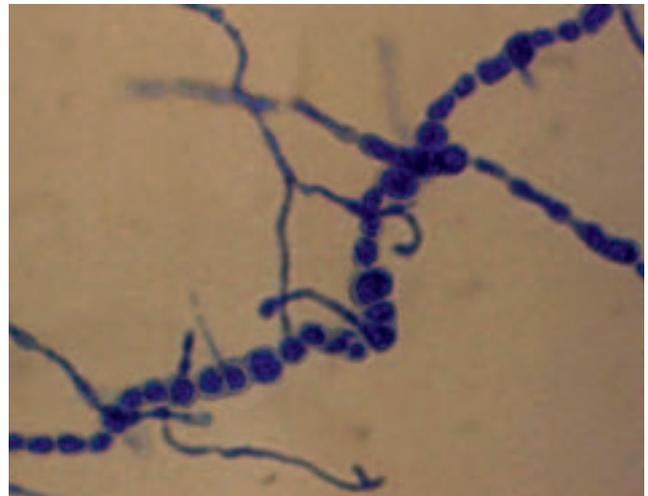


Figure 4. Microscopic examination of a microculture in Sabouraud agar, with lactophenol cotton blue (400X).

adults, associated or not with *tinea corporis*. The lesions on the scalp display white scaly patches with short hairs that do not show any fluorescence when exposed to Wood's light and the invasion of the hair is of an endothrix type.

Tinea capitis may present varying degrees of inflammation, including non-inflammatory pytirosporosis-like lesions and also asymptomatic infections. *Tinea corporis* is not clinically different from the ones caused by other dermatophytes. On the contrary, onychomycosis due to *T. soudanense* have been associated with the endonyx type. This uncommon pattern of nail disease is frequently associated with endothrix scalp infections with or without clinical manifestations. Examination revealed milky-white patches within the affected nail plates, coarse pitting-lamellar peeling and absence of onycholysis and subungual hyperkeratosis [17].

It can be misdiagnosed as psoriasis in an early period which makes searching for other locations such as scalp and skin necessary [8]. Clinical studies of close contacts are mandatory due to the paucity of signs and symptoms of this antropophilic tinea, in order to discover new sources of infections.

Nowadays, accessibility to fast means of transport, makes it possible for this antropophilic specie to spread widely outside its endemic area. The clinical case we are presenting in this paper is important for two main reasons:

- 1) because it is the first case of *T. soudanense* reported in Argentina,
- 2) the patient is a caucasian young woman who had lived in endemic area in Africa for a short period. It is difficult to think of a *tinea faciae* due to an African dermatophyte in Argentina, where the African population is scarce and no previous reports in African immigrants have been published.

This first report of a clinical case due to *T. soudanense* in Argentina should make dermatologists alert of unusual etiological agents and ask for a proper mycological diagnosis.

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