

Case report

Chromoblastomycosis as a problem of the tropics

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Abstract

Chromoblastomycosis can also cause severe but usually superficial lesions on the legs. Like other deep mycosis, this chronic and disabling condition is seen in many tropical regions, including Argentina, where this man was infected. We describe the spatial epidemiology and identify risk factors for disease.

Keywords: Chromoblastomycosis; Verrucous; Lesiones

INTRODUCTION

This unusual dematiaceous fungal infection is a chronic, suppurative, granulomatous mycosis usually localized to skin and subcutaneous tissue^[1]. The main sites affected are those on peripheral locations such as hands, feet and lower legs. The chromoblastomycosis is clinically characterized by tumorlike polymorphous, nodular and vegetating lesions. Chromoblastomycosis is not frequent, it is considered noncontagious and is found worldwide, but most cases occur in tropical or subtropical countries. Its transmission is made of reservoir in the ground (soil, wood, plant materials contaminated with spores)^[2]. Cultural and agricultural practices provide good opportunity for infection. Chromoblastomycosis is caused by the traumatic implantation of the fungi into the skin or subcutaneous structures. For this reason, it is more frequent in males and in agricultural workers. The fungal species classically associated with the disease include: *Fonsecaea pedrosoi*, *Cladophialophora* (*Cladosporium*) *carrionii*, *Fonsecaea compacta*, *Phialophora verrucosa*, and *Rhinochrysiella aquaspersa*^[3].

Case Report

A 55-year-old man, native of Chaco, Argentina, with a history of slowly enlarging vegetating lesions involving the right foot, presented to the Department of Mycoses, La Plata University. On physical examination at the admission time, he presented several nodular and verrucous lesions in distal region of the foot (Fig 1). He used to do rural activities. He has worked almost on barefoot since adolescence.

Clinically chromoblastomycosis was suspected. Biopsy of the skin lesion took place and sample for direct examination was taken and cultured. Direct microscopy in potassium hydroxide (10%) taken from the surface of lesions reveals clusters of small, round, thick-walled, brown sclerotic bodies in the stratum corneum (Fig 2). Histopathological analysis of the excised tissue showed widespread suppurative granulomatous inflammation in the dermis and subcutaneous tissue. Itraconazole 200 mg. b. i. d. orally was given for 24 months plus multiple surgical excisions. Clinical improvement was visible by 8 months. Scrapings and biopsy repeated 14 months after the beginning of the treatment were negative for chromoblastomycosis. Examination 1 year after cessation of treatment did not show any recurrence.

DISCUSSION

There is much about this patient's history that is very typical of chromoblastomycosis (chromomycosis) and therefore very instructive. Several years before

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Figure 1 The patient's right foot at the time of admission to the hospital. Extensive verrucous cutaneous lesion on the dorsum of the foot with associated discomfort. Skin biopsy revealed the changes of chromoblastomycosis.

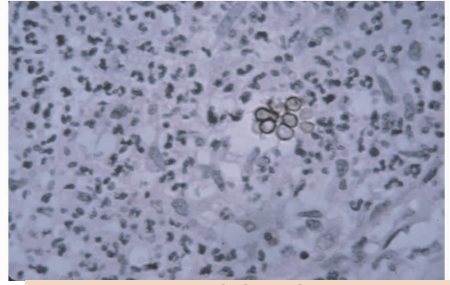


Figure 2 Histopathological appearance of chromoblastomycosis (hematoxylin and eosin, 400 ×).

the doctor visit he began to notice the presence of skin lesion. With all of that signs, he refused to consider visiting a physician. In this patient, clinical findings and mycological studies resulted of a diagnosis of chromoblastomycosis. Fortunately, this patient gradually improved, and was discharged from the hospital.

Differential diagnoses to consider are: South American blastomycosis, cutaneous leishmaniasis, lobomycosis, mycetoma, sporotrichosis and coccidioidomycosis. These pigmented fungi are characterized by the production of spores that are scattered by the wind and from the man or the animals they arrive at the reservoirs before mentioned. The spores are resistant to the changes of temperature, humidity, heat and drying, period of incubation is not known^[4].

Geographical distribution in Argentina, it is most common in Northwest, in particular Tucumán and Salta. In Argentina the predominant sites are lower legs and feet, since the barefoot farmers sometimes work earth with few clothes^[5]. That has a logical explanation, which facilitates the production of wounded and by them the contamination with these fungi. It is notorious that the earth, forest detritus or plant debris are the natural habitat of these types of fungi^[5].

If it is not diagnosed earlier, chromoblastomycosis has a chronic evolutionary course that may cause several problems, such as difficulty in managing therapy because of the recrudescence character of the disease, potential association with the growth of epidermoid carcinoma in affected regions, and poor quality of life and work incapacity to the patient^[6]. This condition is difficult to treat. Overall results of the various treatments were as follows: 31% were cured, 57% improved and 12% failed^[7].

The election drug is the itraconazole to elevated doses, 200-400 mg/día, single or combined with flucytosine or topical therapy with liquid nitrogen.

The data obtained by Hamza et al, showed that: (a) the main age group affected by the diseases range from 41 to 70 years old, (b) 86.1% of the patients were agricultural-workers, (c) 93.2% of them were males and (d) 80.7% showed lesions on the lower limbs (feet and legs)^[8]. Although it is infrequent, new cases are reported in South America every year, ratifying the necessity for further studies on this disease.

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