

Caso clínico

Auricular Chromoblastomycosis: an atypical presentation case and review of literature

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Abstract: Chromoblastomycosis (CBM) is a chronic, localized deep fungal infection of the skin and subcutaneous tissues, caused by dematiaceous (black) fungi. We describe the case of 62 years-old-male patient, from a rural town, with seborrheic dermatitis for more than 10 years, and a desquamative lesion in the right ear, where no diagnosis of CBM was never made. Direct exam with KOH, macro and microscopic culture characteristics, epidemiological and clinical findings confirmed the diagnosis of CBM by *Cladophialophora carrionii*, the first case report of auricular lesions published in Venezuela.

Keywords: chromoblastomycosis, Venezuela, auricular, *Cladophialophora carrionii*.

Cromoblastomycosis auricular: un caso de presentación atípica y revisión de la literatura

Resumen: La cromoblastomycosis (CBM) es una infección fúngica profunda localizada de la piel y el tejido celular subcutáneo, de evolución crónica, causada por hongos dematiáceos (negros). Se describe el caso de un paciente masculino de 62 años, proveniente de una población rural, con dermatitis seborreica por más de 10 años y una lesión descamativa en pabellón auricular derecho, donde nunca se realizó diagnóstico de CBM. Las características macro y microscópicas del cultivo, la epidemiología y los hallazgos clínicos de la lesión confirmaron el diagnóstico de CBM por *Cladophialophora carrionii*, el primer caso de lesión auricular publicado en Venezuela.

Palabras clave: cromoblastomycosis, Venezuela, auricular, *Cladophialophora carrionii*.

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Introduction

Chromoblastomycosis (CBM) is a chronic, localized deep fungal infection of the skin and subcutaneous tissue, caused by dematiaceous (black) fungi, living as saprophytes on plants (*Cactaceae* spp.) or vegetable debris in the soil [1]. All agents generate the same parasitic forms: sclerotic cells (fumagoid cells or Medlar's cell scleronts) [1,2]. Clinically, the infection is characterized by a slow development, and in some cases causing irreversible deformation and partial disability of the affected limb [1,3]. CBM is not a mandatory reportable disease, so the number of cases reported by researchers and study groups summarizes the epidemiological data. The description of cases in atypical anatomical areas represents an extraordinary opportunity to update knowledge and to remind the importance of thinking about this disease to make an appropriate diagnosis. To the best of our knowledge, this is the first published report in

Venezuela of auricular lesions of CBM.

Case

A 62-year-old-man, from Agua Larga, a rural town located at the south of the "Sierra de San Luis", Falcon state of Venezuela, with symptoms of seborrheic dermatitis for more than 10 years. After physical examination, dandruff on the scalp region was found, however, the characteristics of a lesion observed on the right ear, drew significant attention. It was observed desquamative and hyperemic areas with crusts on the right ear, and areas of black dots (Figure 1). After patient's acceptance through informed consent, a sample was collected by scraping the affected areas. Direct KOH examination showed several sclerotic cells (coffee beans like structures, of 4 to 10 µm, brown colored, with thick walls and septum, which could be seen single or grouped) thus confirming the clinical diagnosis (Figure 2A).

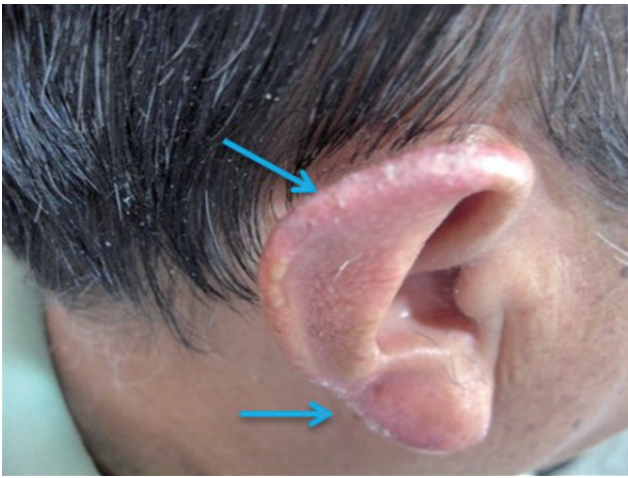


Figure 1. Note along all helix, scaly injury, scabby, slightly hyperemic, irregular borders and black dots (arrows).

Culture on Sabouraud Dextrose Agar (SDA), incubated at room temperature (26-28 °C) after 15 days, showed velvety colonies with dark olivaceous color. Microcultures were performing on SDA at 37 °C in humid chamber, and septate hyphae with small chains of ovoid conidia were observed (Figure 2B). Direct exam with KOH, macro and microscopic culture characteristics, plus epidemiological and clinical findings confirmed the diagnosis of CBM by *Cladophialophora carrionii*. Strain was kept on laboratory cultures as AL-2009/UNEFM. Treatment was started with 200 mg itraconazole daily, showed improvement at the first control. However, we could not follow evolution, as he did not attend other controls.

Discussion

Chromoblastomycosis is a chronic, localized deep fungal infection of the skin and subcutaneous tissue, caused by dematiaceous (black) fungi, described over a century ago. Usually affects individuals from rural and poverty areas. Unfortunately, it is not considered a public health issue, and it is not among the priorities of national/local health systems, even in endemic countries, such as Brazil, Madagascar, Mexico, South Africa, and Venezuela. Also many cases have been described in Australia, China, Guadalupe, India, Japan, Malaysia, United States, other Latin American, and some European countries, extending the classical definition of this mycosis to tropical and subtropical areas; so CBM has a worldwide distribution [4,5]. CBM is not a mandatory reportable disease and nor does it appear in the list of neglected diseases of the World Health Organization (WHO), so the systematic reporting in the international publications have clinical and epidemiological relevance and supports case studies of working groups, which describe for each case, the typical or atypical evolution and new species involved [3].

This fungal infection usually affects asymmetrically, unilaterally and predominantly on the lower limbs, although in some countries, it involves arms and it might affect

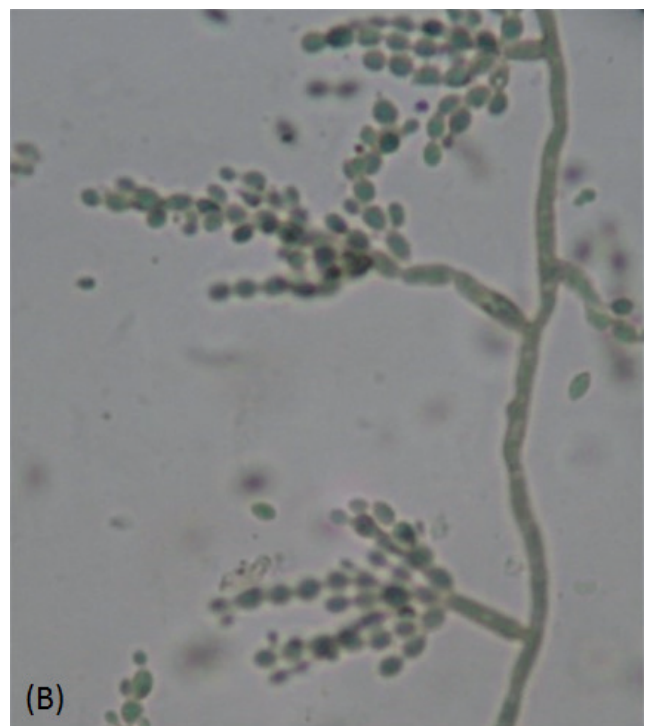
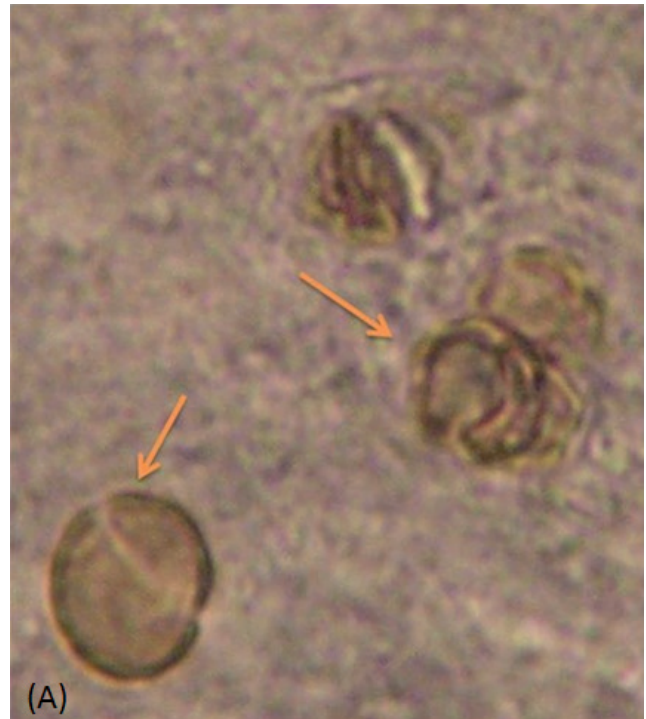


Figure 2. A. Direct examination with KOH: brown sclerotic cells (40X). B. Microscopic view of culture growth. Septate hyphae with small chain of ovoid conidia (40X).

the thorax. The anatomical location of lesions has been associated with exposure to trauma during work, such as goat breeding, logging, harvesting of fruits in deciduous trees, and *Cactaceae* spp. farming, without the proper use of footwear protection. These observations suggest that CBM is also an occupational disease [1].

There is little data published on auricular lesions [6-10].

Iwatsu *et al*, reported a case of CBM that involved the auricle in a patient from Japan and the etiologic agent was *Fonsecaea pedrosoi* [6]. Bittencourt *et al*, presented a case of auricular CMB mimicking an eczematous lesions and the etiologic agent was *Phialophora verrucosa* [7]. Arango *et al*, described a 60-year-old Colombian male, urban resident, who had a dark pigmented lesion, infiltrative and crusty in the ear for 5 years, caused by *Rhinoctadiella aquaspersa*, with a good response to itraconazole therapy at a dose of 200 mg/day for 7 months [8]. França *et al*, reported another auricular CBM in a 67-year-old man caused by *F. pedrosoi*, the most common agent in Brazil [9], and Muñoz *et al*, presented a case located in the left ear of a 29-year-old male from Mexico, caused by *F. pedrosoi*, treated with itraconazole 200 mg daily for 10 weeks, with complete resolution [10].

In Venezuela, the most frequent agent of CMB is *Cladophialophora carrionii*, reported in semi-arid regions; however, *F. pedrosoi*, *P. verrucosa* and *R. aquaspersa* are also found [1,2,4]. In this work, we described an auricular lesion caused by *C. carrionii*. The patient was a farmer and denied having suffered trauma on the ear with a Cactaceae splinter and used a hat for sun protection. For harvesting, he used a sort of sac made of “cocuiza” (*Furcraea andina*), a rough and porous material easily allows for plants residues to adhere to the sac, that when it is placed on the right shoulder for transporting it could rub the ear. It is presumed that exposure may have occurred while performing this task, because the bag was placed on the floor, dragged short stretches where they can easily collect small pieces of plant debris containing the saprophyte phase of the fungus, becoming a rare transmission mechanism. The initial lesion should have been unnoticeable, without phlogosis signs, which slowly evolved into small scaly areas, not severe and painless, so the patient felt that the ear injured was affected by dandruff, and the CBM diagnosis was never made. The successful treatment of CBM is often unrewarding though; therapeutic response to itraconazole and terbinafine are good options in *C. carrionii* cases [5].

Unfortunately, the patient did not seek treatment, most likely because our hospital is not easily accessible to people living in these areas. Moreover, another situation of neglected diseases is the lack of basic, medical and logistics services near poor and rural towns.

It is very important to remember that traumatic infection by the agent does not always has the classic presentations in limbs, therefore it is necessary to investigate clinical,

microscopic and eco-epidemiological areas.

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Conflicts of interest

The authors declare no conflict of interest.

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