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Case report

Auricular chromoblastomycosis caused by *Rhinocladiella aquaspersa*

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An unusual case of chromoblastomycosis localized in the ear and caused by *R. aquaspersa* is presented. The patient was a 60-year-old male urban resident, who had had the disease for 5 years. The lesion was darkly pigmented, infiltrative and crusty. Sclerotic cells were seen on direct examinations and the fungus was recovered in culture and identified on the basis of the characteristic sporulation. Itraconazole therapy at a dose of 200 mg day^{-1} for 7 months produced complete healing.

Keywords auricular lesions, chromoblastomycosis, *Rhinocladiella aquaspersa*

Introduction

Chromoblastomycosis is a chronic, progressive disease of the skin and subcutaneous tissues, characterized by nodular and verrucous lesions. The latter are usually observed in the extremities [1,2] and rarely at other body sites. This entity is caused by several dematiaceous moulds, all identical in their tissue form (sclerotic cells) [1]. In humid tropical areas, *Fonsecaea pedrosoi* is the most common aetiological agent while in dry, desertic areas, *Cladophialophora carrionii* predominates [1,2]. There are other aetiological agents of lesser numerical importance, such as *Rhinocladiella aquaspersa*.

As reviewed by Bittencourt [3], the number of published reports with auricular lesions is small. Information is even more rare on chromoblastomycosis cases caused by *R. aquaspersa* [4,5]. We report here on a patient who had ear lesions caused by the latter fungus.

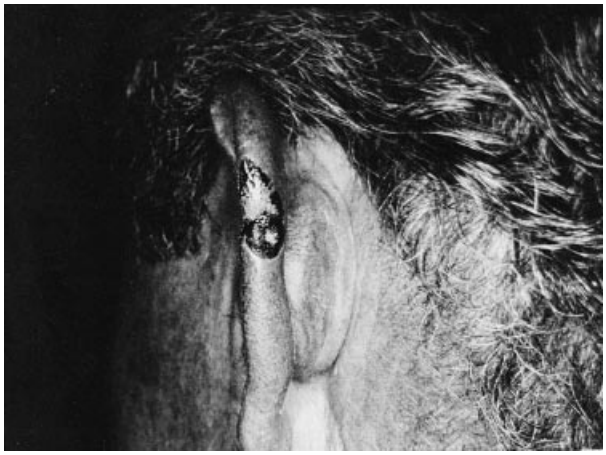

Fig. 1 Lesion at the helix (left ear): observe the infiltration and the dark pigment.

Case Report

A 60-year-old male, a night watchman in the city of Medellín, Colombia, South America, consulted in 1991 due to the presence of a darkly pigmented dermal lesion, localized in the left ear and which was accompanied by infiltration of the underlying area. The problem had begun 5 years earlier and had progressed slowly since then. The patient was unaware of a previous traumatic accident.

Physical examination revealed, in the helix of the left ear, an infiltrative, dark-coloured lesion measuring 2 × 1 cm, the surface of which was covered by crusts and scale (Fig. 1). Direct KOH examination of the latter showed several sclerotic cells, thus confirming the clinical diagnosis. Cultures were performed using mycological media. Treatment was then begun with itraconazole at

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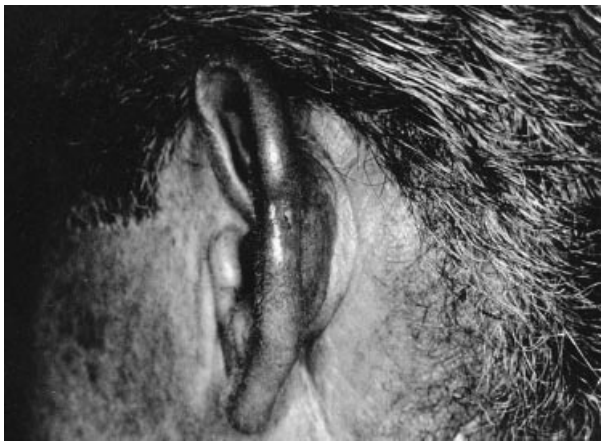

Fig. 2 The same lesion as in Fig. 1 after 7 months of treatment with itraconazole.

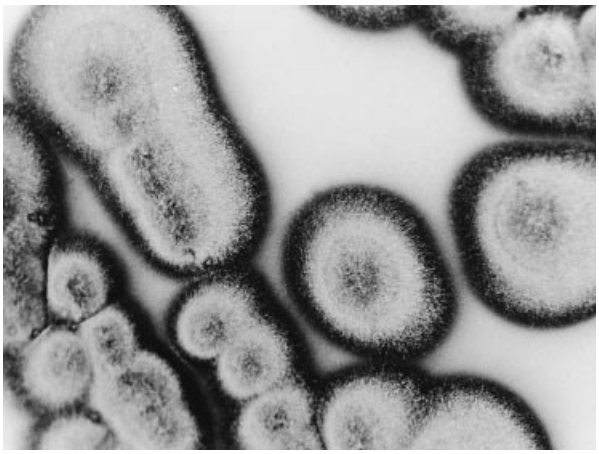

Fig. 3 *R. aquaspersa*: 3 weeks of growth on Sabouraud's glucose agar (24–26 °C).

200 mg day^{-1}; the lesion improved and after 7 months, healing had taken place and mycological examinations were negative (Fig. 2). No side effects or toxic reactions were experienced by the patient during the course of treatment.

After 12 days of incubation at 24–26 °C, a velvety, olive dark mould grew on the Sabouraud glucose agar in plates (Fig. 3). Microcultures were performed on potato glucose agar blocks and they showed erect, thick-walled and darkly pigmented conidiophores which gave rise to conidia only at their distal portions and which were organized in an acropleurogenous fashion. Scars were noticed on the conidiophores at the sites where conidia had been implanted. A few phialides were also noticed. Conidia were single-celled, elliptical, light brown and produced on a sympodial conidiophore (Fig. 4). This microscopic appearance was in accordance with the descriptions of *R. aquaspersa* published by others [1,4–6].

Fig. 4 *R. aquaspersa:* observe the unbranched conidiphore, the conidiogenous cell extending sympodially and the elliptical conidia arranged in an acropleurogenous fashion (100 ×). Bar, 5 μm.

However, the culture was sent to the late Prof. Dante Borelli of the Universidad Central de Venezuela, Caracas, who kindly confirmed the isolate's identification.

Comments

In 1972, Borelli [5] isolated a new aetiological agent from a Mexican patient with chromoblastomycosis, which he originally classified as *Achrotheca aquaspersa*. The species name was chosen because when coming into contact with water, the conidia became dehiscent. Subsequently, the fungus was inoculated into a healthy volunteer who, months later, developed chromoblastomycosis [5]. In 1983, Schell *et al.* [6] changed the genus denomination to *Rhinocladiella.*

According to Padhye [4] two cases of chromoblastomycosis due to this microorganism have been reported from Mexico (Borelli's case 1972), and Brazil (isolate described by Schell, 1983). However, Kwon-Chung [1] mentions four countries where the disease has been reported; unfortunately, the precise references are not given. The case presented here indicates that the confines of *R. aquaspersa* are limited to the Americas.

Regarding the auricular localization, chromoblastomycosis has rarely been described at this anatomical site. Two cases each have been reported from Brazil [3,7] and Japan [8,9], with one each in Cuba [10] and the United States [11]. In four of the cases the aetiological agent was *F. pedrosoi*, and in the remaining two, *Phialophora verrucosa* [3]. Our patient adds a third causative agent, *R. aquaspersa.*

The successful treatment of chromoblastomycosis is often unrewarding [12], especially if the causative agent is *F. pedrosoi* [2]. Consequently, the marked response of our patient to itraconazole therapy was gratifying.

Acknowledgements

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References

1 Kwon-Chung KJ, Bennett JE. Chromoblastomycosis. In: *Medical Mycology*. Philadelphia: Lea & Febiger 1992, 337–55.

2 Esterre P, Andriantsimahavandy A, Ramarcel ER, Pecarrere JL. Forty years of chromoblastomycosis in Madagascar: a review. *Am J Trop Med Hyg* 1996; **55:** 45–7.

3 Bittencourt AL, Londero AT, Andrade JA. Chromoblastomicose auricular. Relato de um caso. *Rev Inst Med Trop São Paulo* 1994; **36:** 381–3.

4 Padhye AA. Identification of the etiologic agents of chromoblastomycosis. In: PAHO Scientific Publication, No. 479 PAHO, *VI International Conference on the Mycoses. Cartagena, Colombia 1983.* Washington, DC, 1986: 87–8.

5 Borelli D. *Acrotheca aquaspersa* nova sp., agente de cromomicosis. *Acta Cient Venez* 1972; **23:** 193–6.

6 Schell WA, McGinnis MR, Borelli D. *Rhinocladiella aquaspersa:* a new combination for *Acrotheca aquaspersa. Mycotaxon* 1983; **17:** 341–8.

7 Azulay RD, Azulay JD. Einige Betractungen zur Chromoblastomykose: Bericht über einen 5 Fallen von Chromoblastomykosen in der Gluteaalregion. *Hautartz* 1959; **10:** 459–63.

8 Fukushiro R. Some considerations on infections by dematiaceous fungi with special regard to chromomycosis. *Jap J Med Mycol* 1977; **18:** 398–421.

9 Iwatsu T, Takano M, Okamoto S. Auricular chromomycosis. *Arch Dermatol* 1983; **119:** 88–9.

10 Moya-Duque MS, Simon RD, Grillo-Martínez RG, Falcon-Lincheta L, cromomicosis de localizaci—n poco usual. *Rev Cubana Med Trop* 1989; **41:** 93–101.

11 Moore M, Cooper ZK, Weiss RS. Chromomycosis (chromoblastomycosis). Report of 2 cases. *J Am Med Assoc* 1943; **122:** 1237–43.

12 Restrepo, A. Treatment of tropical mycoses. *J Am Acad Dermatol* 1994; **31:** S91–102.