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A case of chromoblastomycosis resembling keloid

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Abstract

Chromoblastomycosis is a chronic fungal infection of the skin and subcutaneous tissues caused by pigmented fungi. It typically presents as a warty papule which slowly enlarges and eventually form large hyperkeratotic masses as large as 3 cm thick. Here we present a case of a 78-year-old female, who presented with lesions over the fold of left elbow for three months. On examination multiple well defined erythematous plaques and papules were seen, largest of size 2x3 cm over the anterior surface of the left arm around the cubital fossa. Surface of the plaques were smooth with some of them showing scaling. Appearance of the lesion suggested keloid, however due to atypical site and no history of trauma we performed a skin biopsy for histopathological study and fungal culture keeping a differential diagnosis of chromoblastomycosis in mind. Fonsecaea pedrosoi was isolated in culture and numerous copper penny bodies

were seen in the dermis on histopathology. We diagnosed the patient with Chromoblastomycosis and she was started on Itraconazole 200mg OD and she responded well. Although this is a rare case, we feel it worth to keep a diagnosis of chromoblastomycosis in mind while dealing with keloid like lesions especially at atypical sites.

Keywords: Chromoblastomycosis, Keloid, Copper penny bodies, Fungi

Introduction

Chromoblastomycosis is a chronic fungal infection of the skin and subcutaneous tissues brought on by pigmented fungi that which produce thick-walled single- or multi celled clusters in tissue. Chromoblastomycosis is caused by several fungi, the most common of which are Phialophoraverrucosa, Fonsecaeapedrosoi, Fonseca a compacta and Cladophialophoracarrionii. It usually begins as a warty papule that gradually grows into a hypertrophic plaque; occasionally, the early lesion may be an ulcer [1]. Here we present a case of chromoblastomycosis with a rare presentation.

Case Report

A78-year-old female homemaker, presented with complaints of lesions over the fold of the left elbow for three months. The lesions were slow growing and not associated with itching or pain. There was also history of topical applications of steroids with no improvement Patient could not recall any history of trauma. There was no history any similar complaints in the past or any similar complaints in the family. Patient was a known case of Diabetes mellitus for 10 years on medications. There was no history of any topical applications prior to appearance of lesions or any known allergies.

On physical examination, she was moderately built and nourished, the vital signs and general condition were within normal limits. On dermatological examination (Fig 1), anterior surface of the left arm around the cubital fossa showed multiple well defined erythematous plaques and papules, largest of size 2x3cm. The surface of the plaques was smooth with some of them showing scaling. On palpation the lesions were smooth and firm. Appearance of the lesions suggested keloid, however due to atypical site and with no history of trauma, a suspicion of chromoblastomycosis was also raised and skin was biopsied for histopathological study and fungal culture.

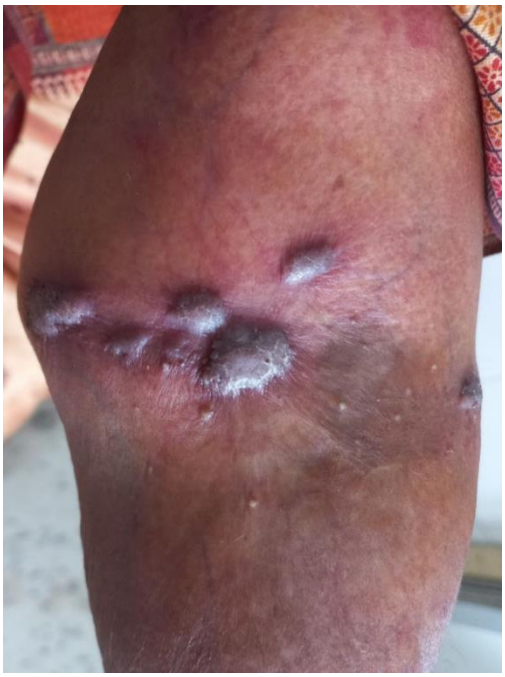

Fig 1: Clinical picture at time of admission: Well defined erythematic papules and plaques with smooth surface and mild scaling.

Fonsecaea pedrosoi was isolated in culture (Fig 2) and numerous copper penny bodies were seen in the dermis on histopathological study (Fig 3). A diagnosis of Chromoblastomycosis was given and patient was started on 200mg Itraconazole daily and patient is responding well to treatment (Fig 4)

Fig 2: Fonsecaea pedrosoi isolated in culture

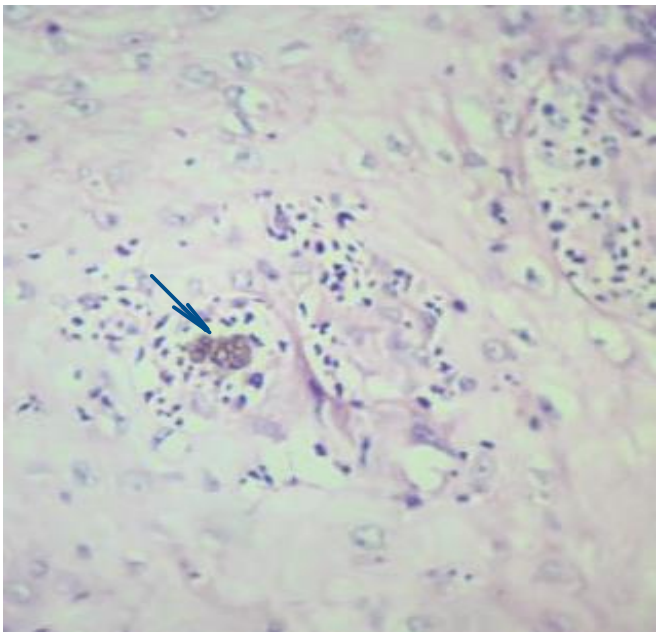

Fig 3: Copper penny bodies (blue arrow) seen in the dermis on histopathological study

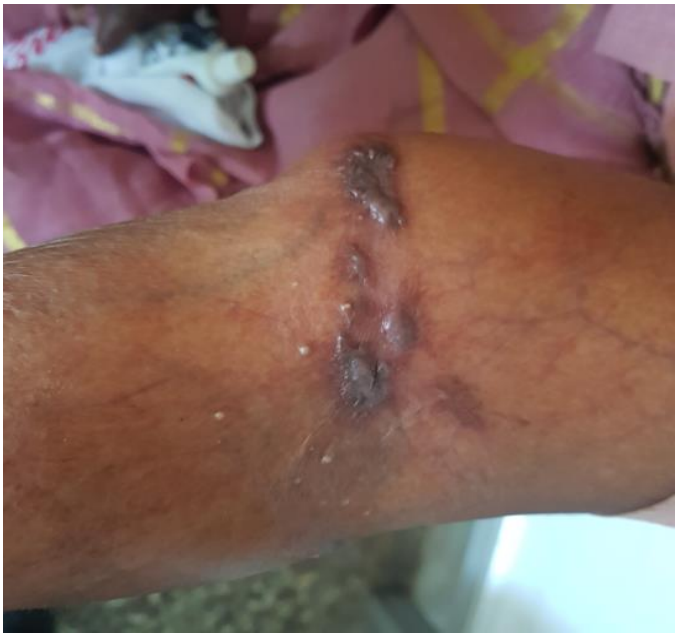

Fig 4: Lesions have become smaller after 1 month of Itraconazole 200 mg a day

Discussion

Pedroso and Gomes observed the first cases of chromoblastomycosis in 1911, but it wasn't until 1920 that the authors published the four cases that they said were caused by Phialophora verrucosa. Chromoblastomycosis was the term coined by Terra et al. To describe the disease in 1922. The main age group affected is between 41-70, children are rarely affected [1,4]. The disease is found in areas with medium to high rainfall in the tropics and in rural communities.

Chromoblastomycosis is caused by several fungi, most commonly by Phialophora verrucosa, Fonsecaaeapedrosoi, Fonsecaea compacta and Cladophialophoracarrioni. Rhinocladiella aquaspersa is also a rare cause. It results from traumatic implantation of the fungi through the skin. Usually, the agents gain entrance trough transcutaneous puncture wounds especially those caused by plant parts. The causative agents have been isolated form soil as well as wood.

In males, lesions are mostly seen on the upper limbs, buttocks and lower limbs, while in females, lesions are usually found on the upper limbs, followed by the head and neck, lower limbs, trunk, and buttocks [6]. Our patient has lesions over the fold of the left elbow. The lesion is usually a warty papule which enlarges to form a hypertrophic plaque. Sometimes it is a flat plaque which expands with central scarring. Rarely the initial lesion maybe an ulcer. These lesions develop into large hyperkeratotic masses as large as 3 cm thick. This may take some months or many years to develop after which secondary ulceration might also be seen [1]. A clinical variant causing psoriasiform lesions have been described [1]. Khairani et al, reported a case resembling keloid in an Indonesian child [7]. Keloid lesions present as pink, red or skin-colored plaques which becomes smoother and rounder and extend outside the boundary of the initial wound. Although it may occur at any site the most vulnerable sites for keloid are earlobes, chin, neck, shoulders, upper trunk and lower legs [8]. Our patient had plaques with smooth surface like a keloid but lesions were present at less vulnerable site with no history of any wound or trauma.

The entry of the fungi into the skin evokes a granulomatous response. The epidermis shows pseudoepitheliomatous hyperplasia. The foreign-body granuloma is seen in the dermis composed of epithelioid cells and Langshan's giant cells. The fungal elements are seen as sclerotic bodies which are brown septate cells. They are also called medlar bodies, muri form bodies or copper pennies. These are extruded trans epidermally [9]. Our patient showed the characteristic sclerotic bodies which helped to confirm the diagnosis.

Investigations are mainly skin biopsy and fungal culture. Scraping from the lesion surface will show sclerotic bodies after adding 10%KOH under the microscope, however as we had a strong suspicion of keloid, we didn't attempt this to minimize trauma to the site. All species appear dark grey-green to black and velvety or downy with a black reverse in culture [9].

Antifungals are the mainstay of treatment. Small single lesion can be excised before starting therapy [9]. The first line options are Itraconazole (100-200 mg daily) or Terbinafine (250 mg daily) till clinical recovery. Flucytosine alone or in combination with amphotericin B can also be tried [1]. Other approaches include cryotherapy or daily local heat application by using heat-retaining gel packs. This is done to induce shrinking and takes 2-3 months. Surgery in large lesions is not indicated due to tendency to form satellite lesions are site of excision. Our patient was put on Itraconazole 200mg daily and showed visible improvement within 1 month.

Conclusion

This is a rare case of chromoblastomycosis resembling keloid. However, the differential diagnosis of chromoblastomycosis must be kept in mind before fixing a diagnosis of keloid especially when it occurs at unusual sites and an uncertain history of trauma.

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