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Case Report

Microbiology Section

Chromoblastomycosis of the Face: A Rare Case Report from the District of Western Maharashtra, India

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ABSTRACT

Background: Chromoblastomycosis is a non-contagious, chronic localized fungal infection of cutaneous and sub-cutaneous tissues caused by several species of phaeoid (ie. Dematiaceous) fungi. It usually known to occur following trauma with wood splinters and usually occurs on the hands, feet and legs. Diagnosis can be made by direct microscopic demonstration of pathognomic brown sclerotic cells in skin scrapings and a positive fungal culture, confirms the same.

Case Presentation: A 40-years old male presented with complaints of slowly spreading raised hyperpigmented lesions, three in number over right side of face and solitary plaque over lip with mild scaling from last six months and it was not associated with itching. Patient did not have any history of injury over the face with wooden splinters. The patient was initially suspected to have Lichen planus and was treated accordingly. But condition of the patients did not improve. He was then sent for Microbiological diagnosis.

Laboratory Diagnosis: The diagnosis of Chromoblastomycosis was made by demonstration of sclerotic bodies with transverse septa arranged in cluster on KOH examination. Isolation of *Fonsecaea pedrosii* on SDA confirmed Chromoblastomycosis.

Conclusion: Although Chromoblastomycosis is very rare on the face, our case demonstrates the need for consideration of Chromoblastomycosis in the differential diagnosis of resistant verrucous plaques of the face. We report an unusual case of Chromoblastomycosis for the first time from the state of Maharashtra and probably second case from India.

Key Words: Chromoblastomycosis, Sclerotic bodies, *Fonsecaea pedrosii*, Phaeoid fungi

INTRODUCTION

Chromoblastomycosis is a non-contagious, chronic, localized fungal infection of the cutaneous and the sub-cutaneous tissues, which is caused by several species of phaeoid (ie. *Dematiaceous*) fungi. Conant (1937) was the first to point out that the fungus, *Phialophora verrucosa*, one of the agents of Chromoblastomycosis, was identical to a fungus which caused "blueing" of wood. *Fonsecaea, Phialophora and Cladophialophora* have also been isolated from wood and vegetable material (Tre Jos 1954, Riedly 1957). They are saprophytes which are found in soil and plants. Chromoblastomycosis is usually known to occur following trauma with wood splinters and it usually occurs on the hands, feet and legs [1, 2]. The actual prevalence and the incidence of Chromoblastomycosis are unknown because of its sporadic case reporting. Its rate of infection has ranged from 1 per 32500 populations to 1 per 70000 populations. The disease is characterized by the presence in infected tissues of brown, thick-walled, globose and multiseptate fungal forms which are known as sclerotic bodies [3, 4]. The diagnosis can be made by the direct microscopic demonstration of pathognomic brown sclerotic cells in skin scrapings and a positive fungal culture, confirms the same [5, 6]. The present report deals with Chromoblastomycosis of the face.

CASE PRESENTATION

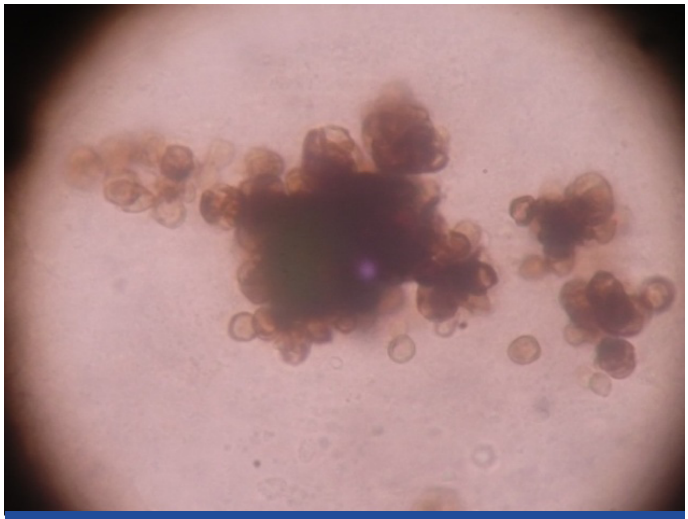
A 40-years old male from the Pune district of the western part of Maharashtra, India, presented with complaints of slowly spreading, raised hyperpigmented lesions, three in number over the right side of the face and a solitary plaque over the lip with mild scaling, from the last six months and it was not associated with itching. The patient did not have any history of injury over the face with wooden splinters. The patient was initially suspected to have Lichen planus and he was treated accordingly. But his condition did not improve. He was then sent for a microbiological diagnosis.

LABORATORY DIAGNOSIS

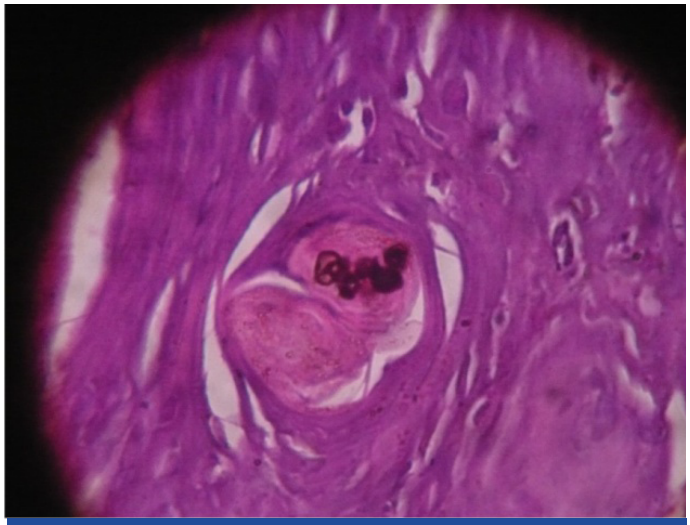
Skin scrapings and crusts were collected from the lesions and the specimens were processed for detection of the fungus by direct microscopic examination after treating them with 10% potassium hydroxide and by culturing it them Sabouraud's Dextrose agar (SDA) medium [5, 6].

The diagnosis of Chromoblastomycosis was made by the demonstration of the pathognomic microscopic finding of sclerotic bodies with transverse septa, which were arranged in clusters on KOH examination. The cultures on the Sabouraud´s Dextrose agar medium showed olivaceous-black colonies which appeared after 18 days of incubation. The colonies became heaped up, folded and black and they were covered with short aerial mycelia which formed a grayish velvet nap on their surface. The reverse of the slant was jet black in colour. Lactophenol cotton blue (LPCB) examination of the growth revealed septate, hyphae and flask shaped conidiophores. The conidia were formed singly inside the basal portion of the phialide. They were extruded through the neck into the cup and beyond. They accumulated around the cup to form a spherical mass of loosely adherent spores. The individual conidia were oval, smooth walled and hyaline cells. Isolation of *Fonsecaea pedrosoi* on SDA confirmed Chromoblastomycosis. Histopathology-A skin biopsy of the affected material revealed inflammatory cells and brownish round septate bodies. He was successfully treated with Terbinafin, Itraconazole plus therapy and local debridement.

[Table/Fig-1]: Hyperpigmented lesions and solitary plaque over lip



[Table/Fig-2]: Skin scrapings from a patient with chromoblastomycosis mounted in 10% KOH showing characteristic brown pigmented, planate-dividing, rounded sclerotic bodies

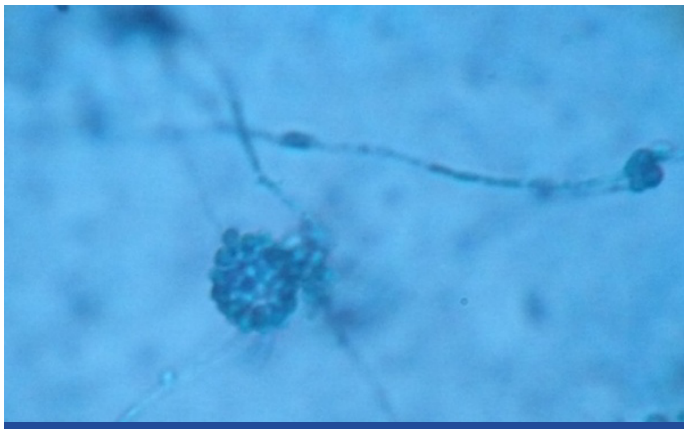


[Table/Fig-3]: H&E stained section showing characteristic dark brown sclerotic cells which divide by binary fission and not by budding. Note all agents of chromoblstomycosis from these sclerotic bodies in tissue

DISCUSSION

This disease has been reported from most parts of the world. It appears to be more common in the tropical and the sub-tropical areas. Chromoblastomycosis must be differentiated from blastomycosis, leprosy, cutaneous tuberculosis, mycetoma,

[Table/Fig-4]: Cultures of the aetiologic agents of chromoblastomycosis are typically olivaceous-black with a suede-like surface



[Table/Fig-5]: LPCB Mount from culture on SDA showing "flask-shaped phialide" with conidia extruding through neck giving appearance of "flowers in vase"

tertiary syphilis, leishmaniasis, malignancy, etc. Microscopy and culture provide a gold standard for its diagnosis. There are various reports on Chromoblastomycosis from India. Shantala G.B. et al., reported a case of Chromoblastomycosis in a patient who was an agriculturist by occupation, who was from Karnataka state [7]. Sharma A et al., reported Chromoblastomycosis which was caused by *Cladosopirium carionii* from Assam, India [8]. Misra A. et al., also reported a case of chromoblastomycosis which was caused by *Fonsecaea pedrosi,* from an ulcerated warty growth over the chin, which was of 1 year duration, from Orissa India [9]. Paniz-Mondolfi et.al reported an extensive chromoblastomycosis of 22 years duration which was caused by *Fonsecaea pedrosi,* which was successfully treated with a combination of amphotericin B and itraconazole [10]. The microbiological confirmation of the diagnosis is very important. This is an inexpensive and simple technique which does not require any sophisticated tools. Proper identification of the fungus which is grown in culture is necessary for the confirmation of the diagnosis as Chromoblastomycosis. Physicians should consider other diagnoses before a long-term treatment with either antitubercular drugs or antileprosy drugs is initiated for long-standing skin infections. Chromoblastomycosis, although it is infrequent, must be considered in the differential diagnosis of long-standing skin lesions in patients from the tropical and sub-tropical regions. Our report emphasizes the need for awareness about this condition and for proper communication between clinicians and microbiologists.

CONCLUSION

Our case was unique because of its unusual site of presentation and because of the absence of any history of trauma prior to the onset of the infection. Although Chromoblastomycosis is very rare

on the face, our case demonstrates the need for the consideration of Chromoblastomycosis in the differential diagnosis of resistant verrucous plaques of the face. We are reporting an unusual case of Chromoblastomycosis for the first time from the state of Maharashtra and probably it is the second case from India.

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