OPEN ACCESS
Saudi Journal of Pathology and Microbiology
Abbreviated Key Title: Saudi J Pathol Microbiol
ISSN 2518-3362 (Print) |ISSN 2518-3370 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Case Report

A Rare Case of Extensive Chromoblastomycosis

T. Shalom Divya Teja[1*], L. Krishna[2], N. Sreemani Kumari[2], C. Swathi[3]

[1]Second Year Postgraduate, Department of Pathology, Malla Reddy Institute of Medical Sciences, Suraram, Hyderabad, Telangana, India
[2]Professor, Department of Pathology, Malla Reddy Institute of Medical Sciences, Suraram, Hyderabad, Telangana, India
[3]Assistant Professor, Department of Pathology, Malla Reddy Institute of Medical Sciences, Suraram, Hyderabad, Telangana, India

DOI: 10.36348/sjpm.2023.v08i04.004 | **Received:** 03.03.2023 | **Accepted:** 11.04.2023 | **Published:** 17.04.2023

***Corresponding author:** T. Shalom Divya Teja
Second Year Postgraduate, Department of Pathology, Malla Reddy Institute of Medical Sciences, Suraram, Hyderabad, Telangana, India

Abstract

Chromoblastomycosis also known as chromomycosis is a chronic fungal infection of the skin and subcutaneous tissue. The infection usually results from traumatic injury or inoculation of microorganism from a specific group of dematiaceous fungi.

Keywords: Chromoblastomycosis, traumatic injury, dematiaceous fungi.

INTRODUCTION

Chromoblastomycosis is a rare disease caused by several pigmented fungi most common being Cladophialophora carrionii and Phialophora verrucosa. Fonsecaea pedrosoi is the most common agent implicated. These fungi are saprophytic in soil, vegetation, wood splinters and thorns and implanted by trauma into skin of exposed parts. The males in tropical, sub tropical rural areas are affected. A total of 169 cases were reported in India since 1957-2017 [1]. It causes chronic and progressive cutaneous and subcutaneous tissular involvement associated with micro abscesses, often with tissue proliferation. It produces characteristic sclerotic cells or muriform cells [1].

CASE REPORT

37 years old female presented with complaints of multiple hyper pigmented verrucous plaques all over the face, ears for over 15 years. Multiple hyperpigmented plaques, few associated with nodules over trunk and upper limb are also seen (Figure 1). Fine Needle Aspiration Cytology (FNAC) was done and pus aspirated.

Cytosmears revealed plenty of neutrophils, degenerated neutrophils, lymphocytes, foamy histiocytes, tiny histiocytic clusters, brown branching septate hyphae, occasional giant cells, sclerotic bodies and fibrin against a proteinaceous background and cytologically diagnosed as Acute suppurative inflammatory lesions of pigmented fungal etiology with a possibility of Chromoblastomycosis (Figure 2).

Skin biopsy was done and sent for histopathological confirmation. Grossly we Received two skin covered bits, One measuring 1 x 0.3 cm and another measuring 0.2 x 0.2 cm.

HISTO PATHOLOGICAL EXAMINATION

Haematoxylin & Eosin stained section revealed hyperplastic epidermis with hyperkeratosis, acanthosis. Upper dermis shows collection of histiocytes, giant cells – foreign body type admixed with eosinophils, lymphocytes along with aggregates of neutrophils intermingling with hyphae structures, brownish in colour, septate, acute angle branching and brown circular copper penny appearing bodies [2] and it was diagnosed as Acute suppurative inflammatory lesion with foreign body type giant cell reaction of pigmented fungal organism – Chromoblastomycosis (Figure 3 & 4).

Clinical Images

Photos taken with permission of patient.

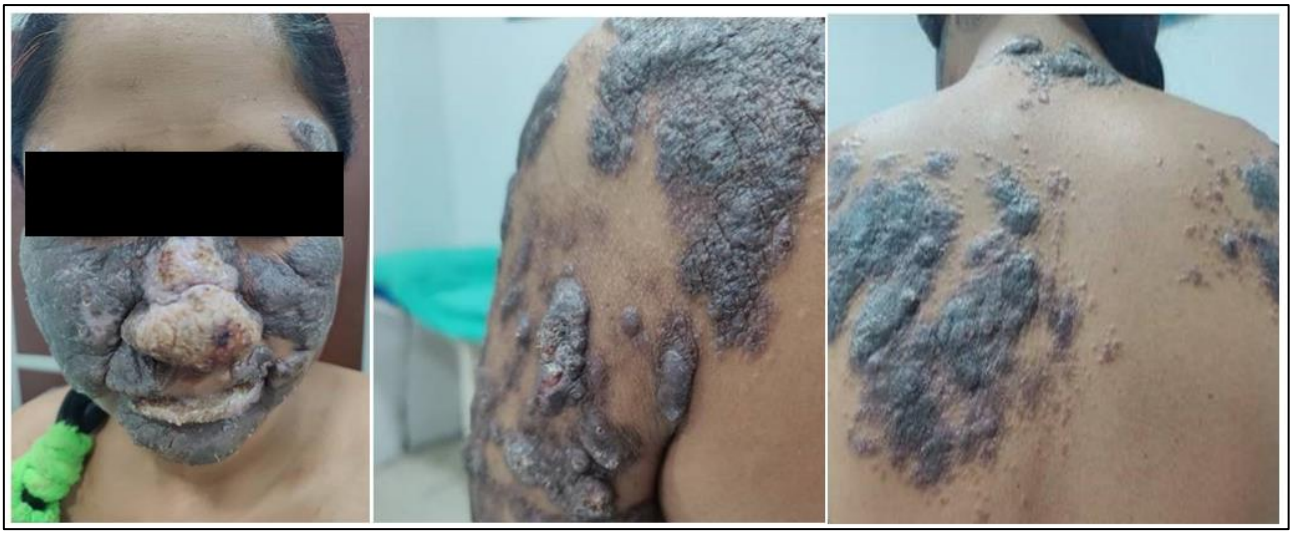

Figure 1: Extensive lesions over face, upper limbs and back

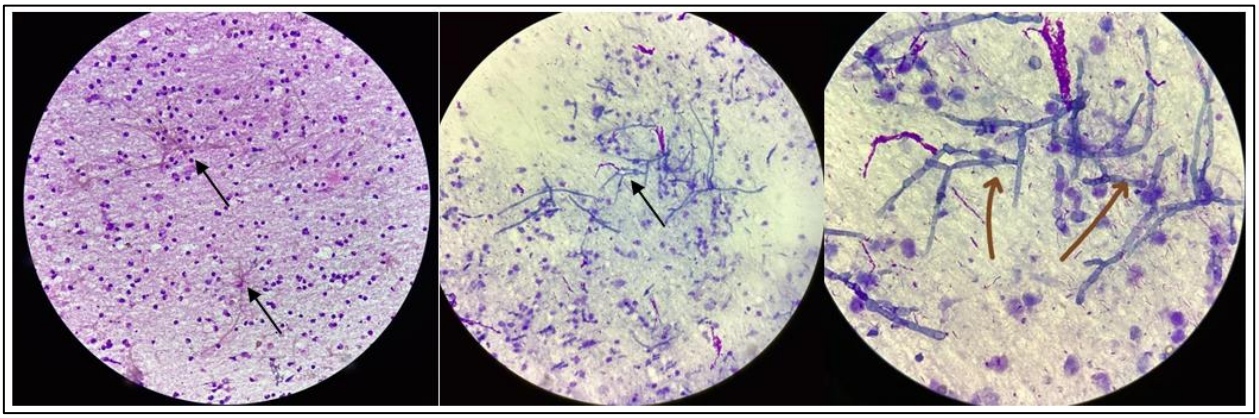

Figure 2: Cytosmears studied shows septate fungal hyphae and inflammatory infiltrate

HISTO PATHOLOGICAL EXAMINATION:

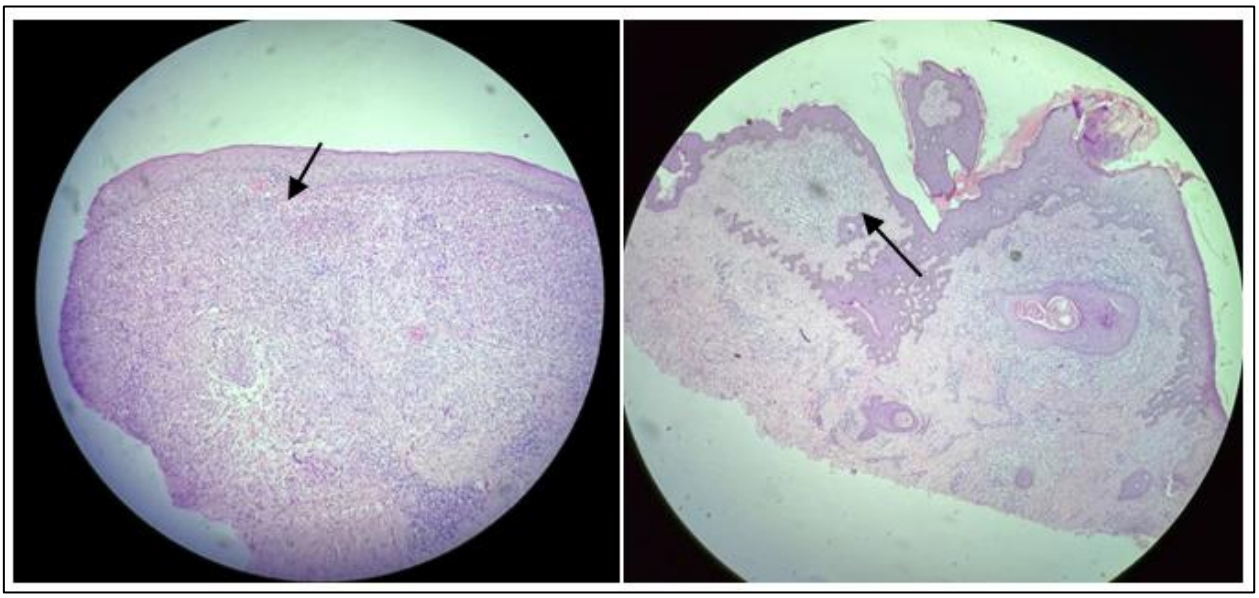

Figure 3: Section studied shows thinned out epidermis with focal loss of rete pegs and underlying dermis shows inflammatory infiltrate [H&E,x10]

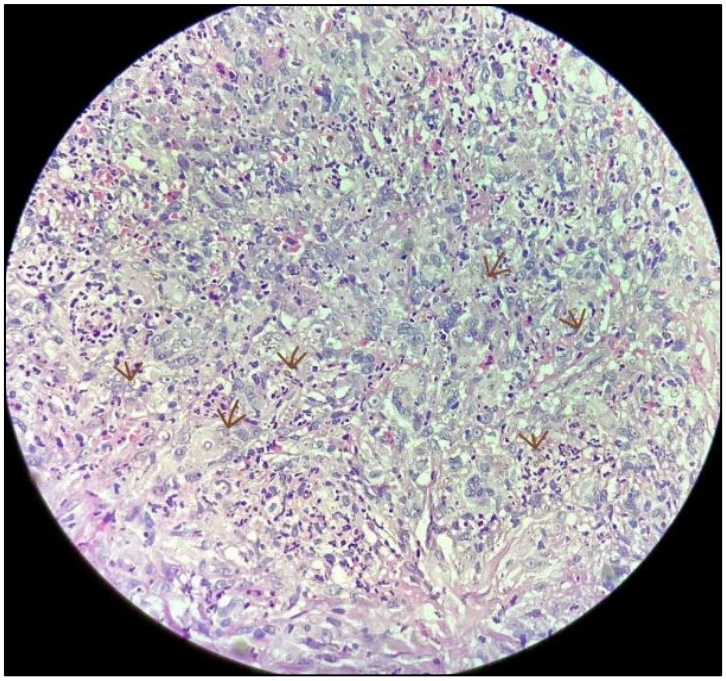

Figure 4: Section studied shows fungal septate hyphae and sclerotic bodies. [H&E,x40]

DISCUSSION

Chromoblastomycosis was originally reported from Brazil. It was first reported in India by Thomas et al in the year 1957. Other than India and Brazil it has been reported from Madagascar, Sri Lanka, West Central Africa, Japan, Mexico, Cuba, Dominican Republic, Nepal, Venezuela and Australia. In India, Thomas *et al*., reported two cases from the state of Assam. Since then, there have been several case reports from the Sub Himalayan Belt, Western and Eastern coasts. All these areas have warm and humid climatic conditions.

Chromoblastomycosis is a non fatal, chronic, invariably localized infection with solitary lesions of skin and subcutaneous tissue. Flavio has described five types of lesions in chromoblastomycosis which includes nodular, tumorous, verruciform, cicatrial and plaque type of lesions. Dermal lesions can range from small nodules to large papillary-like eruptions. The disease is present worldwide but prevalence is higher in rural populations with tropical or subtropical climate. Typical manifestation is a dermal lesion - cauliflower-like nodules [2, 3].

The fungus usually confines itself to the sub cutaneous tissues. Draining lymph nodes may participate in the pathological process. Complications like ulceration and lymphedema may also appear. There are chances of secondary bacterial infections worsening the primary disease symptoms resulting in itching, peculiar odour and lot of unrest. It is also implicated in the genesis of lymph stasis and consequent elephantiasis. Scratching may lead to autoinoculation with secondary lesions. Lymphatic dissemination sometimes showing progressive lesions arising in a sporotrichioid fashion has been documented. Hematogenous spread has been reported for involvement of large areas. A non-protective T helper 2 (Th2) immune response with ineffective humoral involvement is also noticed [4].

In the infected tissue, characteristic dark colored, thick walled, muriform cells i.e. sclerotic cells (medlar bodies) are observed, which is the Histopathological Criterion for the diagnosis. Chromoblastomycosis lesions are clinically polymorphic leading to misdiagnosis. In its more severe clinical forms it may cause an incapacity for labor due to fibrotic sequelae and also due to a series of clinical complications, and if not recognized at an early stage, it can be refractory to antifungal therapy [5].

CONCLUSION

Chromoblastomycosis is the most misdiagnosed disease. Bacterial cultures, cytology and histopathology are the corner stone's for diagnosis and are necessary to prevent misdiagnosis.

REFERENCES

1. Agarwal, R., Singh, G., Ghosh, A., Verma, K. K., Pandey, M., & Xess, I. (2017). Chromoblastomycosis in India: review of 169 cases. *PLoS neglected tropical diseases*, *11*(8), e0005534.
2. Queiroz-Telles, F., Esterre, P., Perez-Blanco, M., Vitale, R. G., Salgado, C. G., & Bonifaz, A. (2009). Chromoblastomycosis: an overview of clinical manifestations, diagnosis and treatment. *Medical mycology*, *47*(1), 3-15.

3. David, E. E. (2009). Levers Histopathology of Skin –al 10th Edition, Pages 607-608.
4. Ameen, M. (2009). Chromoblastomycosis: clinical presentation and management. *Clinical and experimental dermatology*, *34*(8), 849-854.
5. Chandran, V., Sadanandan, S. M., & Sobhanakumari, K. (2012). Chromoblastomycosis in kerala, India. *Indian Journal of Dermatology, Venereology and Leprology*, *78*, 728-733.