

Conidiobolomycosis: a case report

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Abstract: Conidiobolomycosis (rhinoentomophthoromycosis) is a chronic rhino-facial subcutaneous granulomatous fungal infection that can be associated with disfiguring facial elephantiasis, and rarely, death. *Conidiobolus coronatus*, usual pathogen, is a saprophyte of decomposing vegetation. We report a case of rhinoentomophthoromycosis in an immunocompetent male involving maxillary sinus and nose. Microbiological diagnosis was in favour of conidiobolomycosis. The patient was treated with antifungals and the swelling progressively disappeared.

Keywords: Conidiobolomycosis, *Conidiobolus coronatus*, rhinoentomophthoromycosis

I. Introduction

Conidiobolomycosis (also known as rhinoentomophthoromycosis) is a cutaneous/mucosal fungal infection seen mainly in the tropical regions of the world. It mainly affects the rhino facial region of the face in immunocompetent adult males (80%).^[1] The mycosis is caused by a saprophytic^[2] aseptate, filamentous fungus, *Conidiobolus coronatus*, present in soils and dried vegetables, belonging to the class Zygomycetes, order Entomophthorales phylum Zygomycetes. Other member's like-- *Conidiobolus incongruus* and *C. lamprauges* have also been reported to cause human disease.^[3] The commonest presentation of the mycosis is characterized by chronic, indolent and localized swelling of nose, perinasal tissues, paranasal sinuses, cheeks, and upper lips.^[4] It is characterized histopathologically by the presence of aseptate hyphae surrounded by an eosinophilic halo, the so-called Splendore-Hoeppli phenomenon.^[5] Here, we have present a rare case report of Conidiobolomycosis in an adult immunocompetent male.

II. Case Report

A 58 year old farmer came to the hospital with history of a progressive painless left nasal swelling for the last 5 months. His chief complaints were nasal obstruction, stuffiness, and headache. He noticed a small pea-sized painless swelling inside his left nare about 5 months back which gradually increased in size leading to his complaints and associated disfigurement of his face. (Fig.1) There was no other significant history apart from frequent nose picking.



Fig.1 The patient

An ENT examination revealed an irregular, nodular lesion affecting the anterior part of the nasal septum, vestibule, floor of the nose and associated part of the inferior turbinate. The left maxillary sinus was slightly tender. There was no tenderness of frontal, ethmoid, or right maxillary sinus. Systemic examination was within normal limits.

The routine blood investigations were within normal limits. Radiological investigation revealed non-enhancing soft tissue density lesion involving the left nostril and left maxillary sinus. Aspirated thick blood-stained, exudate showed filamentous structures suggesting fungal etiology.

The exudate was inoculated on two Sabouraud dextrose agar (SDA) plates. One plate was incubated at 37°C and the other was kept at room temperature. The plates were observed daily for growth. Following 48 hours of inoculation the plates showed colorless, creamy flat colonies. Lacto phenol cotton blue mount showed short, broad mainly aseptate hyphae with short erect conidiophores and large round conidia giving rise to secondary conidia. (Fig. 2) The colony morphology was consistent with *Conidiobolus coronatus*. Histopathological study showed Splendore-Hoeppli phenomenon surrounding broad aseptate hyphae. The patient was treated with fluconazole and the swelling progressively disappeared.

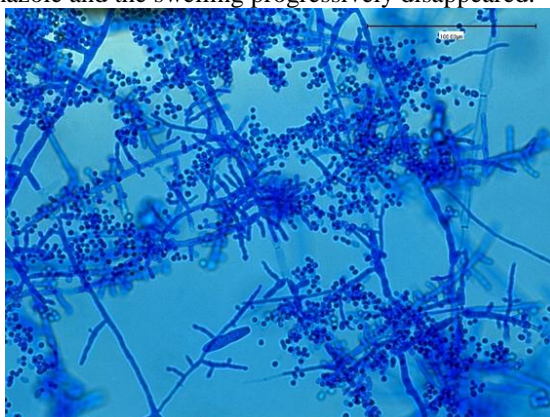


Fig. 2Lacto phenol cotton blue mount

III. Discussion

Conidiobolomycosis should be included in the differential diagnosis of patients who present with nasal symptoms and painless centofacial swelling. [6] Massive tissue eosinophilia and Splendore–Hoeppli material coating thin-walled hyphae confirms the clinical diagnosis.

IV. Conclusion

Thus, the awareness about the fungal etiology of chronic granulomatous infection will help in the proper treatment of many patients.

References

- [1]. Martinson FD, Clark BM. Rhinophycomycosis entomorphthorae in Nigeria. *Am J Trop Med Hyg* 1967; 16:40-7.
- [2]. Pfaller MA, Diekema DJ. Unusual fungal and pseudo fungal infections of humans. *J Clin Microbiol* 2005; 43:1495-504.
- [3]. Kimura M, Yaguchi T, Sutton DA, Fothergill AW, Thompson EH, Wickes BL. Disseminated human Conidiobolomycosis due to *Conidiobolus lamprauges*. *J Clin Microbiol* 2011; 49:752-56.
- [4]. Chander J. *Textbook of Medical Mycology*. 3rd ed. New Delhi: Mehta Publishers; 2009. p. 361-86
- [5]. Cherian L M, Varghese L, Panchatcharam B S, Parmar H V, Varghese G M. Nasal Conidiobolomycosis: A successful treatment option for localized disease. *J Postgrad Med* 2015; 61:143-4
- [6]. Agrawal S, Meshram P, Qazi M S. Rhinotomophthoromycosis: A rare case report. *Indian J Med Microbiol* 2013; 31:401-3