CHROMOMYCOSIS CAUSED BY EXOPHIALA JEANSELMEI

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A rare case of chromomycosis caused by **Exophiala jeanselmei** in a 10-year-old female child is reported.

Key words : Chromomycosis, Exophiala jeanselmei.

Chromomycosis is a rare chronic fungal infection of skin and subcutaneous tissue. It is caused by a number of pathogenic fungi, more common of which are P. *Phialophora pedrosoi*, *P. compactum* and *verrucosum*. *Exophiala jeanselmei* is a rare cause for this disease[2]. The involvement of the mucous membranes is most unusual. A case of chromomycosis involving the face and nasopharyngeal mucosa in addition to the extremities and caused by *Exophiala jeanselmei* is being reported.

Case Report

A 10-year-old girl reported 4 years ago with mildly itchy skin lesions of one year duration all over the body. She started with a single papule on the right cheek, which slowly increased in size to form a plaque. Subsequently, similar lesions developed on the face, trunk and extremities. She also had foul smell from her oral cavity and stuffiness of the right nostril for the past one year.

Examination showed violaceous papules and plaques, 1-3 cm in diameter. Some of the plaques had crusts and were surrounded by numerous pinhead sized papules (Fig. 1). The

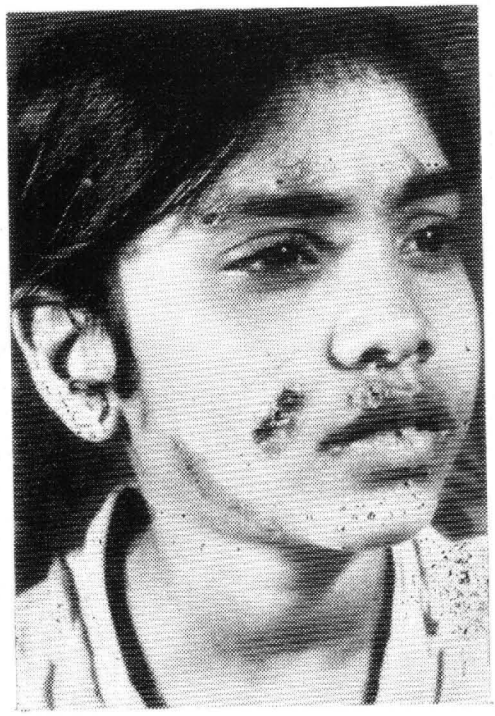

Fig. 1. Crusted plaques over the face.

lesions were located on the face, extremities and trunk. Mucosal examination showed angular stomatitis and ulceration of the soft palate. Right side of the nasal vestibule also had ulceration and crusting. Systemic examination did not show any abnormality.

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Routine examination of urine and stools was normal. Blood examination showed TLC 10900/cmm, N 38%, E 14% and L 58%. ESR was 50 mm 1st hour (Westergren method). Mantoux test was 15 × 15 mm. X-ray chest did not show any abnormality. Histopathological examination of a biopsy from a face lesion showed tuberculoid granulomas.

Treatment with streptomycin 0.5 gm and isoniazid 150 mg daily for 1½ months showed no regression in the old lesions, rather some new lesions also appeared. Repeat biopsy from another plaque showed features similar to the previous biopsy. X-ray chest showed consolidation in the right basal region, paracardiac area and demineralisation of the left half of scapula and shoulder region. At this stage, streptomycin was replaced by rifampicin in a dose of 300 mg daily. There was still no improvement after three weeks. Review of the earlier biopsy specimens and special stains showed thick walled spores (sclerotic bodies) with pigment around them within the tuberculoid granulomas (Figs. 2 and 3), suggestive of chromomycosis. Cultures of the tissue on Sabouraud dextrose agar (SDA) with chloramphenicol, blood agar (incubated in air) and Loeffler's serum slope showed oval, elongated yeast-like cells after 4 days incubation. Jet black and smooth and shiny colonies were seen on the blood agar after 4 days. On 7th day, SDA showed enlarged colonies. The lactophenol cotton blue slide culture of the growth showed brownish, septate, branched hyphae. The spores present along the hyphae and at the tips were oval and some were septate. Abundant, detached, free spores showing disjunctions were present (Fig. 4). Because of these features the fungus was identified as *Exophiala jeanselmei*.

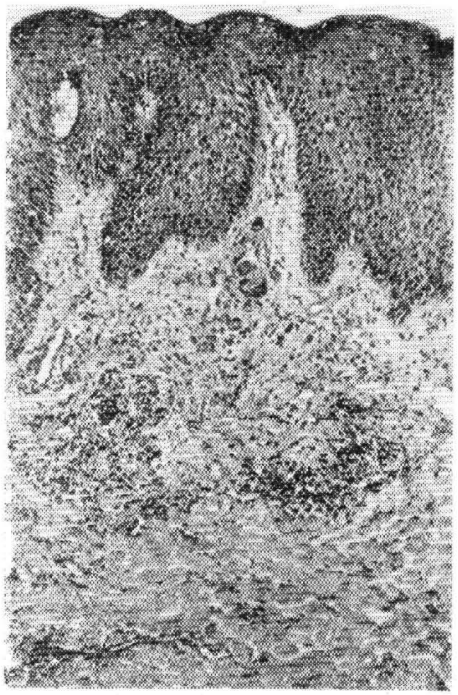

Fig. 2. Tuberculoid granuloma in the upper dermis with scattered giant cells (H & E × 100).

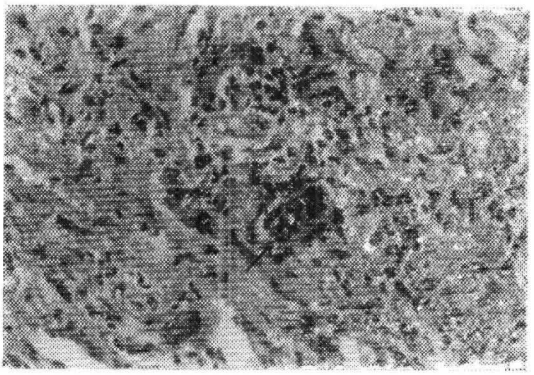

Fig. 3. Fungus within the giant cell (arrow) (H & E × 400).

Treatment with griseofulvin orally and application of 5-fluorouracil cream locally, for 4 weeks was without any effect. Repeat culture yielded similar fungus. *In vitro* testing showed this fungus to be resistant to griseofulvin and potassium iodide upto 15 mcg/ml but sensitive

Fig. 4. Slide culture of *Exophiala jeanselmei* (× 533).

to thiabendazole at 4 mcg/ml. Mintazole tablets twice daily orally and clotrimazole oinment topically were given for six weeks without any effect. Intralesional infiltration with amphotericin B for six weeks showed some flattening of the lesions, but the patient left the hospital against medical advice and was lost to further follow up.

Comments

The skin lesions were suggestive of ulcerated lichen planus, but histopathology was suggestive of tuberculosis. The patient did not respond to antitubercular treatment. Review of histological sections was suggestive of chromomycosis, and fungal culture showed growth of *Exophiala jeanselmei*. Thus, the patient presents many interesting features. It involved unusnal sites like face and nasopharynx in addition to extremities. Involvement of lung and bones is another uncommon feature of the disease. Lastly, fungal culture studies showed growth of a rare fungus, *i.e., Exophiala jeanselmei.*

Exophiala Jeanselmei is a dematiaceous fungus often encountered in subcutaneous mycoses. It was isolated from cases of mycetoma[2,3]. It was also reported to cause chromomycoses[1]. From Pondicherry, the same fungus was reported in a case of Phaeohyphomycosis[4]. Thus, it is important to recognise the varied manifestations caused by this black fungus.

The earlier confusion regarding the taxonomy of the fungus is now cleared. The conidiogenous cells of the fungus increase in length even after conidia formation. Liberation of each successive conidium results in growth scars or annellations which are the characteristic feature of the genus *Exophiala*. On the contrary, no further growth occurs in conidiophore after the liberation of first conidium which is characteristic of *Phialophora*. This fungus has been renamed as *Exophiala jeanselmei*[5].

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