INDIAN J DERMATOL VENEREOL LEPROL 1997; 63: 243-245

LOCALISED CUTANEOUS BLASTOMYCOSIS

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A case of localized cutaneous blastomycosis is reported for its rarity from Indian Subcontinent. This patient had distinctive morphology of an annular verrucous lesion, resembling a "three quarter moon". The lesion regressed remarkably following ketoconazole therapy.

Key words : Deep mycoses, Blastomycosis

A chronic, indolent, annular verrucous lesion is many a times a diagnostic dilemma. Cutaneous tuberculosis, syphilis, leprosy, chronic bacterial pyoderma, deep fungal infections, squamous cell carcinoma and bromoderma encompass the spectrum of clinical differential diagnoses.[1] Comprehensive laboratory investigations usually isolate the causative agent. Otherwise such a lesion poses a therapeutic challenge. We report here a case of localized cutaneous blastomycosis with the details of clinical features and therapeutic response.

Case Report

A 56-year-old farmer had a chronic verrucous lesion over his left leg. It appeared as nodule following an injury 2 months back. The nodule subsequently ulcerated and discharged purulent material. The patient received anti-tuberculosis treatment in the form of isoniazid, rifampicin and ethambutol for a period of 4 months, before presenting to us. There was no improvement, on the contrary, there was slow but relentless extension.

On examination, the patient had a single lesion over his left leg which had healed in the centre by an atrophic scar. The lesion had a sharply elevated and distinctly verrucous sloping border. The crusted border extended on one side to resemble a 'three quarter moon' (Fig. 1). When the crust was lifted pus exuded. There were no other significant findings on general, systemic or dermatological examination. X-ray of the chest was normal.

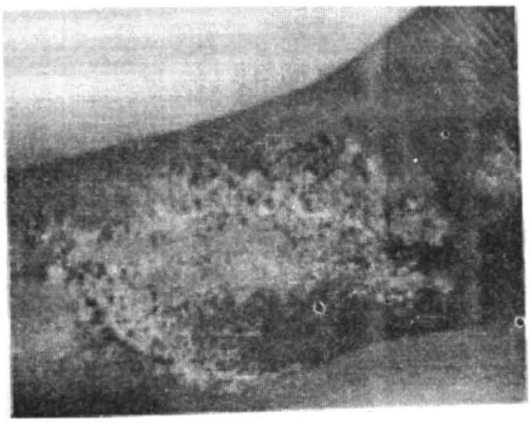

Fig. 1 . " Three quarter moon appearance"

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Histopathological examination of the skin showed hyperkeratotic and acanthotic epidermis. In the upper dermis therewas granulomatous infiltration consisting of lymphocytes, epitheloid cells and plasma cells. Results of AFB and PAS stains were negative.

The purulent material was sent for bacterial, fungal and mycobacterial culture. The results of KOH mount, culture studies for pathogenic bacteria, isolation of the fungus as well as mycobacteria were negative.

Therapy was initiated by systemic antibiotic (erythromycin 500mg. QID). However the lesion failed to respond even after 21 days of therapy. Considering the diagnosis of localized cutaneous blastomycosis based on the onset and progress of the lesion and its distinctive morphology, the patient was given ketoconazole 200mg BD. After 3 months of ketoconazole therapy, monitored with S G P T levels every 20 days, the lesion has regressed remarkably.

Discussion

North American Blastomycosis is a chronic infectious disease caused by *Blastomyces dermatitidis.* The disease mainly occurs in the United States and Africa, but there are reports of the cases from Israel, Saudi Arabia and Poland.[1] Primary focus of infection is in the lungs, but clinically important pulmonary involvement is seen in only one half of the cases.[2] Causative organism *B. dermatitidis* can be demonstrated from the clinical material as round budding organism in a potassium hydroxide mount. Careful search is indicated as organisms are often sparse.[1]

Localized cutaneous plaque is characterised by verrucous hyperplasia and microabscess formation.[3] The plaque tends to clear centrally leaving an atrophic scar whereas the peripheral border extends on one side only resembling a one half to three quarters moon.[3] Sporadic reports of cases in Indian literature,[4,5] showing characteristic morphology simulating cutaneous blastomycosis are actually cases of blastomycosis-like pyoderma. These patients showed positive culture reports for pathogenic bacteria mainly staphylococci and were successfully treated with prolonged systemic antibiotic therapy. In addition, blastomycosis-like pyoderma is not characterized by 'three quarter moon' appearance and does not show granulomatous infiltration on histology.[4,5]

Randhwa et al,[6] were first to report isolation of *Blastomyces dermatitidis* from the bronchial aspirates of an Indian patient, who had never travelled abroad, provideng evidence for the endemic occurrence of *B. dermatitidis* in India. They anticipate that the geographic distribution of this organism will be found to be more widespread when exhaustive laboratory and clinical studies are conducted.[6]

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