Ind J Dermatol Venereol Leprol 1993; 59 : 143 - 5

BLASTOMYCOSIS - LIKE PYODERMA

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A case of blastomycosis-like pyoderma developing over burn sites on the extremities of a 19-year-old male Libyan is reported. The patient did not have any underlying medical problem.

Key Words : Blastomycosis-like pyoderma

Introduction

The cases of blastomycosis-like pyoderma have been reported under various nomenclatures like "pseudoepithelimoas cutanes," "pyodermatitis chronica vegetans von Azua," "pseudoepithelioma of Azua," "mycosis like pyoderma,"[1] and "dermatitis vegetans."[2] This is considered to be an unusual tissue reaction in patients with a low resistance to a secondary bacterial infection and usually associated with some underlying disease. This non-specific reaction of the skin with variable manifestations is usually presenting as one or multiple large verrucous vegetating plaques with scattered pustules and elevated borders, commonly affecting the body folds. Histologically it is characterized by a non-specific chronic granuloma with abscess formation and pseudoepitheliomatous hyperplasia. On culture there is growth of a least one pathogenic bacteria.[1]

We present an unusual case of blastomycosis-like pyoderma developing over burn sites on the extremities.

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Case Report

A 19-year-old male Libyan patient had burn with cooking gas on 21.09.89 on the face, forearms, legs and feet (15% body surface) and was admitted to the burn unit on the same day, where he was treated with alternate day dressing of silver sulfadiazine ointment and systemic antibiotics. After 12 days the patient was transferred to the dermatology department because he developed some vegetative lesions over the burn sites. The lesions suddenly increased in size and number in a couple of days. By this time burn areas showed partial healing with hypopigmentation and erythema with multiple vegetative plaques and nodules ranging from 0.5 cm to 5 cm in size, more on the margin (Fig. 1). The bigger

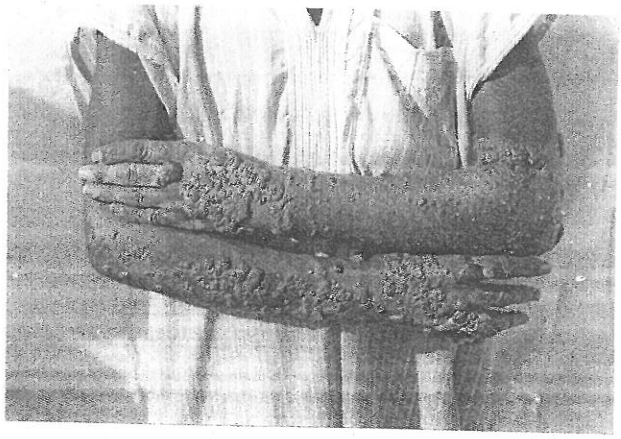

Fig. 1. Lesions of blastomycosis-like pyoderma on burn sites

lesions had some oozing of pus while the smaller lesions in the center showed more vascularity and some bleeding.

A complete blood count showed 11,400/ml leukocytes with 74% neutrophils, 24% lymphocytes and 2% monocytes; erythrocyte sedimentation rate was 75 mm of 1st hr; red blood cells, haemoglobin and platelets were within normal range. Blood culture did not reveal growth of any bacteria. Liver and renal function tests did not reveal any abnormality. Serum electrophoresis revealed total proteins 4.10 gm% with 38% albumin, 7% alpha 1 globulin, 16.4% alfa 2 globulin, 12.8% beta globulin and 25.1% gamma globulin. Immunoelectrophoresis of blood revealed normal level of immunoglobulins. Blood tests for VDRL, rheumatoid factor, L E cell phenomenon, HBS Ag, and AHIV were negative. Pus culture revealed growth of *Staphylococcus* coagulase positive and *Pseudomonas aeruginosa*. Routine laboratory tests on urine and stools did not reveal any abnormality.

Biopsy taken from a bigger lesion showed hyperkeratosis, acanthosis and pseudoepitheliomatous hyperplasia. The dermis was heavily infiltrated with lymphocytes, histiocytes and a few plasma cells.

The patient was treated with injectable gentamycine and cloxacillin for 5 days followed by oral cloxacillin for 3 weeks. Local treatment was given in the form of potassium permangnate lotion 1:8000 compresses and dressing with sodium fusidate ointment twice daily. The secondary infection was controlled with 2 weeks time but the size of the lesions was same. Later regression in the size of the lesions started gradually and complete healing took place within 2 months with residual thin atrophic scars (Fig. 2).

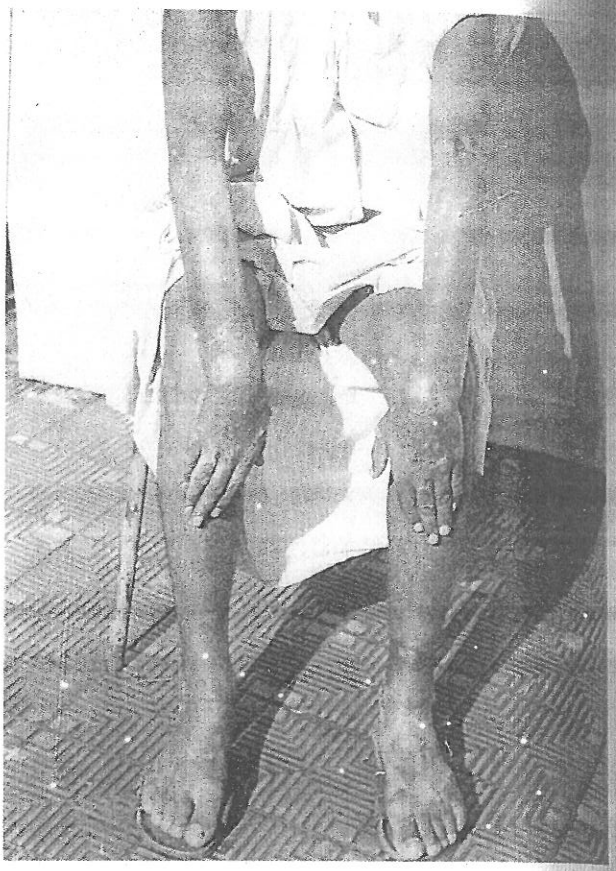

Fig. 2. After 2 months - complete healing of lesions with thin residual scars

Comments

Deniel et al[1] suggested 6 criteria for the diagnosis of blastomycosis-like pyoderma : 1. large verrucous plaques with multiple pustules and elevated borders, 2. pseudoepitheliomatous hyperplasia with abscesses in tissue biopsy specimen, 3. growth of at least one of the pathogenic bacteria, such as *S. aureus*, beta-haemolytic *Streptococci* or *Pseudomonas aeruginosa*, 4. negative culture for deep fungi, atypical mycobacteria and *Mycobacterium tuberculosis*, 5. negative fungal serology

and 6. normal bromide level in the blood. In our patient first 3 criteria were present but we could not investigate for the other criteria. However our patient responded well to prolonged antibiotic therapy.

Brown and Kligman[3] suggested that blastomycosis-like pyoderma is an unusual tissue reaction in patients with low resistence to secondary bacterial infection, both of their patients were alcoholics. Daniel et al[1] reported analysis of 7 patients and inferred that underlying medical problems like chronic granulocytic leukemia, azathioprine and prednisone therapy for arthritis, X-ray therapy, chronic cholecystitis, pulmonary granuloma and diabetes mellitus might have lowered the resistance of their patients. Our patient did not have such an underlying cause exept moderate hypoproteinemia, possibly as a result of the burn, which might have lowered the resistance to secondary bacterial infection.

References

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