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# BLASTOMYCOSIS LIKE PYODERMA

Dermatology

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## ABSTRACT

Blastomycosis-like pyoderma (BLP) is an uncommon, exaggerated, vegetative tissue reaction that occurs in patients with downregulated immunity. Reported causes are seen in immune compromised states that include human immunodeficiency virus, malnutrition, chronic alcoholism, leukemia[1], immunosuppressant use, radiation therapy, pulmonary granuloma, diabetes mellitus [1][2], prolonged pyogenic infections like Staphylococcus Aureus [1][2] & elevated blood bromide levels. It can occur in immunocompetent individuals also [3].This condition is characterised by large crusted verrucous plaques with an elevated border[1] and multiple pustules.

## KEYWORDS

### INTRODUCTION:

Blastomycosis-like pyoderma presents as skin lesions similar to blastomycosis or cutaneous tuberculosis. The commonest organisms implicated are Staphylococcus aureus, b-hemolytic streptococci, Pseudomonas aurigenosa, Proteus mirabilis, E. coli and Candida albicans [2] .Factors like alcoholism and nutritional deficiency lead to impairment of host defenses resulting in the reduction of skin resistance to bacterial invasion. In this scenario, minor injuries create an area of diminished immune resistance and leading to the growth of common skin pathogen; creating a hypertrophic tissue response resembling cutaneous blastomycosis. As infection sets in, new lesions automatically arise as countless organisms from the affected site grow over the predisposed skin.[4]

### CASE REPORT:

A 34 year old male patient had a history of road traffic accident 10 days back in which he sustained multiple abrasions on his left forearm & wrist .Patient applied a sulphonated topical formulation over the abrasions. 2 days after, the lesions over the extensor aspect of his left forearm progressed to form rough warty thickening with extensive crusting. H/o oozing from the lesion was present associated with greenish yellow discharge. On examination a verrucous plaque measuring 8x4 cm situated over the left extensor aspect with crusted erosions was noted (FIGURE 1).They were non tender on palpation. Pus culture from the discharge yielded Staphylococcus Aureus. The lesion was biopsied for histopathological study.

Microscopic examination of the specimen under lower power view (FIGURE 2A) showed massive hyperkeratosis with acanthosis. High power view (FIGURE 2B) showed a mixed inflammatory cell infiltrate within the dermis consisting predominantly of neutrophils and lymphocytes with a few plasma cells.

### DISCUSSION:

In 1903, Azua and Pons first described the condition under the title of pseudo-epithelioma tous cutane.[1] Various synonyms for this condition are: pseudoepithelioma cutane, pyodermitis chronica vegetans of Azua and pseudoepithelioma of Azua, mycosis-like pyoderma, hyper inflammatory proliferative pyoderma and pyoderma vegetans. [5] .In 1979 Su et al proposed a criteria for the diagnosis which included the following.[1]

They include large verrucous plaques with multiple pustules and elevated border, pseudoepitheliomatous hyperplasia with abscesses in tissue biopsy specimen, growth of at least one pathogenic bacterium, such as S. aureus, ,B-haemolytic streptococci or Pseudomonas aeruginosa, negative culture for deep fungi, atypical mycobacteria and Mycobacterium tuberculosis, negative fungal serology test and a normal bromide level in blood. The usual presentation is a large crusted verrucous plaques with multiple pustules & elevated border[1]The characteristic lesions appears either singly or in multiples and are located on the face, neck, forearm, hand, leg or foot.[1].Histology shows pseudoepitheliomatous hyperplasia and multiple abscesses.[1][2].

Differential diagnosis North American blastomycosis, chromoblastomycosis, coccidioidomycosis and phycomycosis diagnosed by positive cultures and cutaneous herpes infection presenting with vegetating verrucoid plaques. Prolonged ingestion and elevated blood levels of bromide suggesting bromoderma can present with verrucoid plaques & pyoderma gangrenosum. Histopathological differential diagnosis includes lupus vulgaris, deep fungal infections like North or South American blastomycosis, granuloma inguinale and basal cell carcinomas.[2]

Various treatment methods have been tried including systemic antibiotics like ciprofloxacin, penicillin, cotrimoxazole and topical antibiotics steroids, curettage, wet compresses and lasers like Co2 lasers have also been used. Recent reports suggest a response to acitretin.[6]

### CONCLUSION:

Blastomycosis like pyoderma is an uncommon condition.The clinical features were suggestive of infection&pus culture also showed growth with Staphylococcus aureus. HPE showed plenty of neutrophils, lymphocytes &plasma cells. This case was reported because of its uncommon occurrence .

**FIGURES 1:**

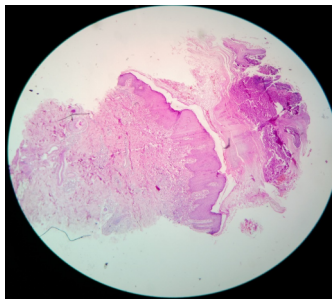

**FIGURE 2A**

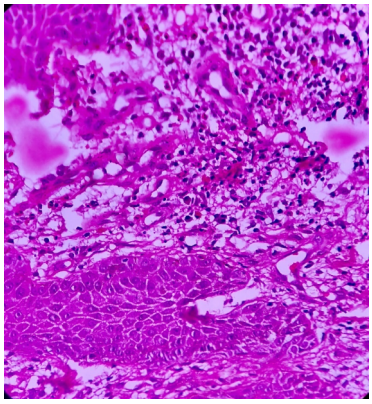

**FIGURE 2B**

**LEGENDS TO FIGURES:**
FIGURE 1: Clinical picture showing verrucous plaque in Left extensor aspect of forearm measuring 8x4 cm

FIGURE 2
- A: microscopic image scanner view shows massive hyperkeratosis, acanthosis

FIGURE 3
- B: Microscopic image at 5x magnification shows neutrophils, lymphocytes and few plasma cells in the dermis

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None

**CONFLICT OF INTEREST:**
The authors declare there is no conflict of interest

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