



## SWEET'S SYNDROME AS CUTANEOUS MARKER FOR UNDERLYING FOLLICULAR LYMPHOMA: AN ULTIMATELY FATAL RARE CASE REPORT.

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### ABSTRACT

An elderly male patient presented with fever for one week, followed by multiple excoriated cutaneous lesions distributed over sun exposed areas of 15 days duration. Clinical diagnosis of erythematous skin lesions was considered and skin biopsy preceded by complete blood count was performed. Total Leukocyte Count was increased and peripheral smear showed leucocytosis with > 50% of cleaved cells. Skin biopsy showed features of the Sweet's Syndrome and was started on corticosteroids. In view of peripheral smear findings, the patient was evaluated for staging of the disease. Lymph node enlarged in the right axillary region with moderate hepatosplenomegaly. Fine needle aspiration cytology from the lymph node showed diagnostic features of follicular lymphoma and a complete work up for grading was advised. Excision biopsy of lymph node showed features of low grade follicular lymphoma. The patient expired in a couple of days inspite of prompt and rigorous treatment. This patient presented only with features of Sweet's syndrome and was incidentally diagnosed to have follicular lymphoma. Follicular lymphoma, even of low grade can present with skin lesions, with spill over in peripheral blood which could turn to be highly fatal. This highlights that elderly patients presenting with non-specific cutaneous lesions with hepatosplenomegaly should be evaluated to rule out possibility of underlying Hematological malignancy.

**KEYWORDS:** Cleaved cells, Follicular lymphoma, Peripheral blood spill over, Sweet's Syndrome.



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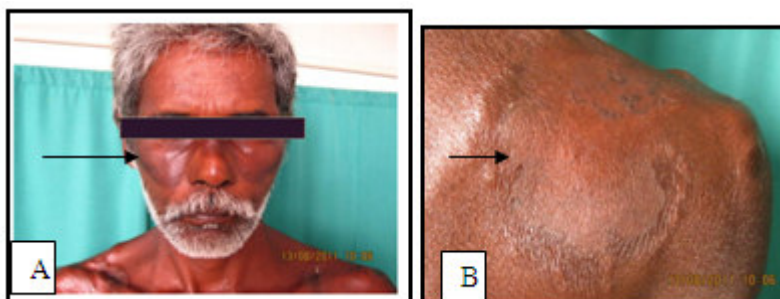
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## INTRODUCTION

Sweet's syndrome is a rare cutaneous disease manifested by acute febrile erythematous neutrophilic dermatosis with many forms of clinical associations<sup>[1]</sup>. However Sweet's syndrome is often associated with immunological disease like Rheumatoid arthritis,<sup>[2]</sup> inflammatory bowel disease and hematological disorders, especially with myelodysplastic syndrome [MDS]<sup>[2,3]</sup>. Sweet's syndrome with follicular lymphoma association and rapid spill over is a very rare presentation<sup>[3,4]</sup> and to date only 5 fatal cases had been published in association with follicular lymphoma<sup>[5]</sup>. *We in this case report describe an elderly male patient manifested with Sweet's syndrome, which presented as a cutaneous marker for underlying follicular lymphoma which turned out to be fatal inspite of prompt intensive treatment.*

### Case history

A 56 year old male presented with fever, night sweats, evening rise of temperature – 1 month, followed by multiple excoriated cutaneous lesions with some erythematous plaques and nodular lesions over the sun exposed areas- 15 days duration; H/o loss of weight and loss of appetite for 1month;No past history of drug intake or comorbid conditions. On examination: febrile, pale. With cervical and Axillary lymph node enlargement- nodes are firm, mobile .Moderate hepatosplenomegaly noted. Cutaneous examination showed hyperpigmented macules over the malar region of the face; indurated, tender plaques were present on the trunk and right forearm and shoulders . Laboratory investigation- Hemoglobin:7 gm/dl; Total leukocyte count : 87,000 cells/cu.mm with lymphocytosis[60%]; ESR : 130 after 1hr.

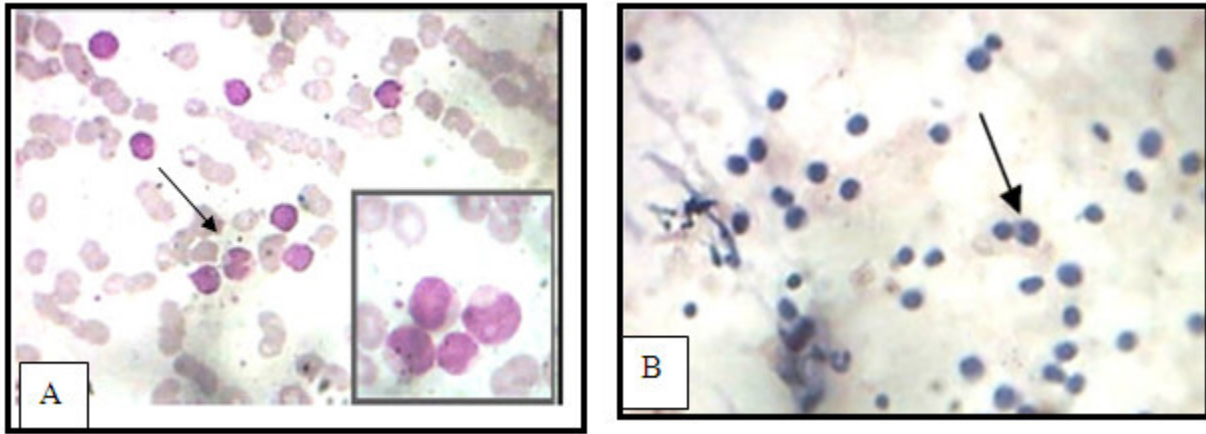


**Figure 1**  
**Hyperpigmented macules over the malar region of the face[A]; back [B]**

### Peripheral blood smear

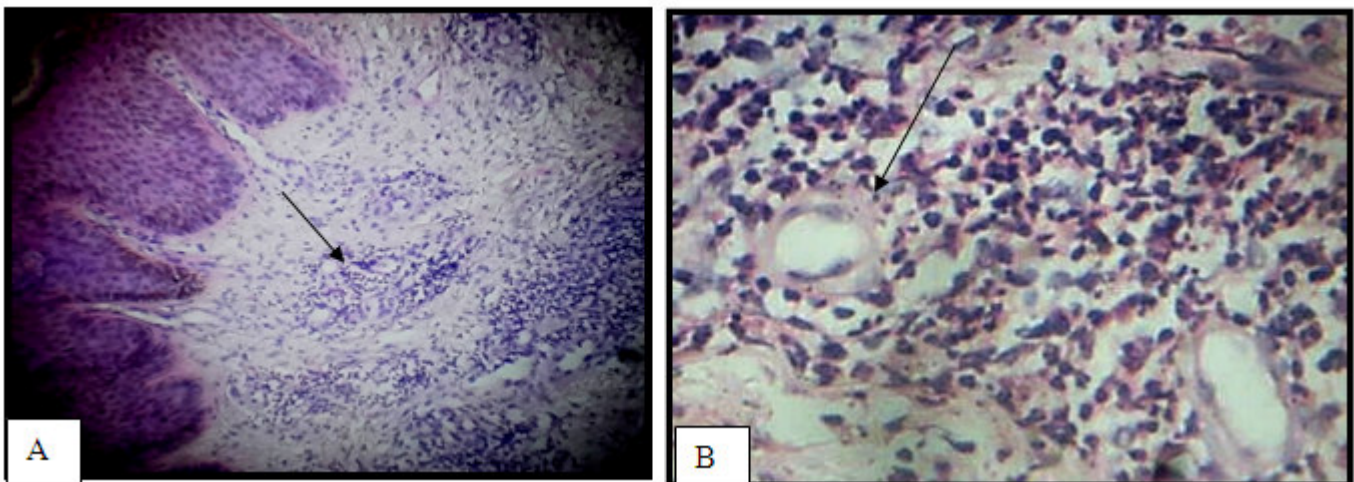
Increased WBC's by > 50 % of atypical cells (Leucocytosis scanty cytoplasm, condensed nuclear chromatin with nuclear indentation-cleaved cells/Buttock cells). Morphology of atypical cells was suggestive of leukemia/lymphoma. A biopsy from the skin lesion was performed which show microscopical features- Epidermis with mild spongiosis and hyperkeratosis; Dermis showing papillary dermal edema, dense perivascular infiltration of neutrophils, eosinophils and nuclear debris. Blood vessels showed prominent endothelium

and a few extravasated erythrocytes, favouring a diagnosis of Sweet's Syndrome and was started on steroid as per standard regimen<sup>[6]</sup>. Ultrasound abdomen showed- Moderate hepatosplenomegaly.Fine needle aspiration of axillary lymph node was performed which show high cellularity composed of small lymphocytes with cleaved nuclei and inconspicuous nucleoli, favouring a diagnosis of follicular lymphoma and a complete work up for grading was advised.



**Figure 2: A**

***Peripheral blood film showing mature lymphocytes with scant cytoplasm; cleft/notched nuclei and evenly condensed chromatin,Leishman stain X oil immersion; Inset: Cleaved lymphocytes, oil immersion; B: FNAC- monotonous population of cleaved lymphocytes [Pap40X]***



**Figure 3: A**

***Epidermis showing mild spongiosis, papillomatosis.Dermis showing papillary dermal edema, dense perivascular infiltration of neutrophils, eosinophils and nuclear debris [H&E,10X]. B- Blood vessels show prominent endothelium and a few extravasated erythrocytes [H&E-40X]***

Axillary lymph node biopsy showed features of follicular lymphoma-low grade. The patient was immediately referred to quaternary centre with our close follow up and observation where he was started on prompt and specialized

treatment with rituximab and monoclonal antibodies, chemotherapy. However the patient developed rapid spill over with multiorgan failure and expired in a couple of days in spite of our rigorous intensive treatment.

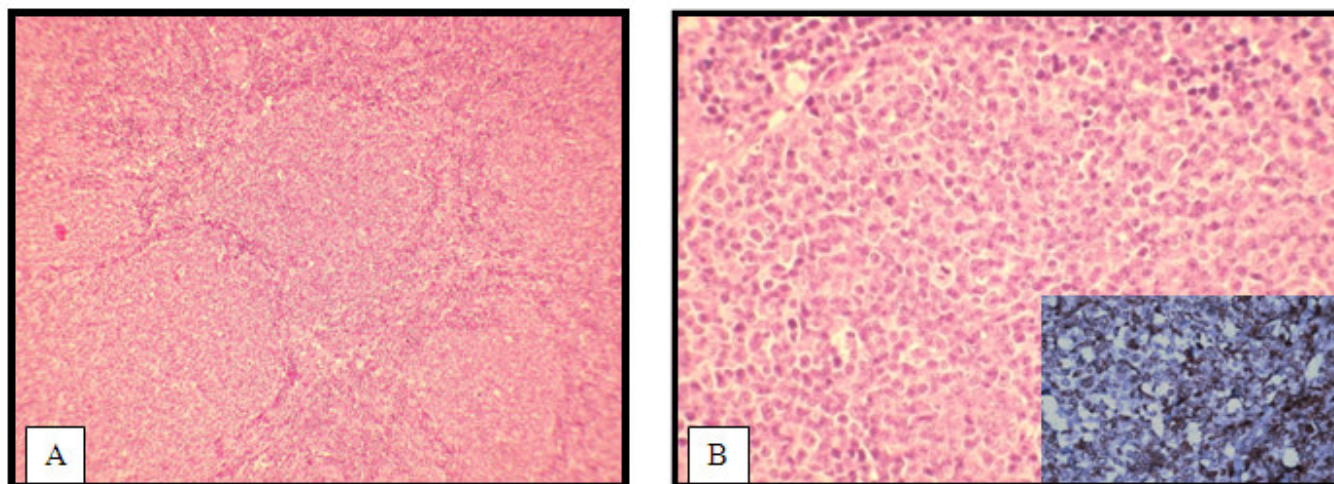


Figure 4:A

**Follicular hyperplasia with ill defined margins and closely packed with poorly formed mantle zones [H&E 10X]; B: Effacement of architecture, Monomorphic cells, centrocytes with nucleoli and mitosis[ H&E 40X];Inset: CD 19 positivity Immunohistochemistry stain -40X**

## DISCUSSION

Sweet's syndrome, was first described by Robert Douglas Sweet in 1964. Sweet's syndrome is an acute febrile neutrophilic dermatosis characterised by fever, peripheral neutrophilic leucocytosis, tender erythematous plaques with non vasculitic neutrophilic infiltration in dermis<sup>[1,7]</sup>. It is also known as a Gorman Button disease in honour of first two patients and the close differential diagnosis includes pyoderma gangrenosum, erythema multiforme and adverse drug reaction<sup>[8]</sup>. The currently postulated theory for pathogenesis is a hypersensitivity reaction to antigens with cytokine dysregulation and G-CSF stimulation<sup>[8,9]</sup>. Sweet's syndrome is a reactive phenomena<sup>[2]</sup> and is considered as a marker for systemic disease<sup>[10,11]</sup>. 20% of cases are associated with malignancy, predominantly hematological [MDS, AML]<sup>[12]</sup> as observed in our case with framed criteria as illustrated in the following table

### **Table 1 Criteria for Classical and Malignant associated Sweet's syndrome Diagnosis<sup>[2,8]</sup>**

#### **Major**

1. Acute onset of typical skin lesions;

2. Histopathological finding consistent with Sweet's syndrome without leukocytoclastic vasculitis.

#### **Minor**

1. Fever > 38 degree C or general malaise
2. Association with malignancy or inflammatory disorder or pregnancy or respiratory infection
3. Excellent response to systemic corticosteroids or potassium iodide
4. ESR>20mm,CRP positive, peripheral leucocytosis, left shift

#### **Patient must meet 2 major&2 minor criteria for diagnosis.**

Attacks of Sweet's syndrome may precede the hematologic disorder by a period ranging from 6 months to 6 years<sup>[12]</sup>. However, association of Sweet's syndrome with follicular lymphoma in an otherwise stable patient is a very rare entity which often goes unnoticed especially in middle aged females and elderly males as illustrated in literature.<sup>[12,13]</sup> Follicular lymphoma is a predominantly low grade B cell lymphoma with very minimal incidence among Asian population which often presents as asymptomatic without any associations and indolent course<sup>[10]</sup>. In the present study, our patient presented with erythematous skin lesion of Sweet's syndrome, which acted as cutaneous marker for underlying

occult low grade follicular lymphoma, which rapidly spilled over in blood in an ultrashort period of time turning out to be fatal in spite of treatment makes this case report unique.

## CONCLUSION

1.Sweet's syndrome a rare skin disorder acts as a cutaneous marker of underlying malignancy but the presence of follicular

lymphoma with rapid spill over in blood and unresponsiveness to appropriate rigorous treatment turning to be highly fatal and in this case report makes it alarming and unique. 2.This highlights that elderly patients presenting with non- specific cutaneous lesions even of short duration with hepatosplenomegaly and lymphadenopathy should be evaluated to rule out possibility of underlying Hematological malignancy.

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