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The Great Masquerader: Pulmonary Tuberculosis Presenting as Sweet Syndrome

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Abstract: Background: Sweet syndrome is an acute neutrophilic dermatosis that may be idiopathic or associated with underlying systemic disease. We describe a rare presentation of pulmonary tuberculosis manifesting as sweet syndrome in a middle-aged man, who came to us with fever, dyspnea and erythematous papular eruptions. Evaluation revealed neutrophilic leukocytosis, anaemia, bilateral pulmonary nodules with mediastinal lymphadenopathy, and granulomatous inflammation on bronchoalveolar lavage. Mycobacterium tuberculosis was confirmed serologically thereafter. Histopathology of the cutaneous lesions substantiated the diagnosis by demonstrating dense dermal neutrophilic infiltration. Treatment with standard first-line anti-tubercular therapy and a short course of systemic corticosteroids resulted in complete clinical resolution. This case emphasizes tuberculosis as an uncommon but important infectious trigger of Sweet syndrome and highlights the relevant aspects of this unique syndrome.

Keywords: tuberculosis, papules, sweet syndrome, dyspnea, fever

INTRODUCTION

Sweet syndrome, or acute febrile neutrophilic dermatosis, is an uncommon inflammatory disorder characterized by the abrupt onset of tender erythematous plaques or nodules with fever and arthralgia. Although most cases are idiopathic, secondary forms occur in association with malignancies, autoimmune disorders, infections, and drugs. Tuberculosis is a rare but important infectious association, especially in endemic regions where it may remain occult. We report the case of a young male presenting with Sweet syndrome which eventually led us to a diagnosis of pulmonary tuberculosis.

CASE PRESENTATION

history of high-grade fever and popular lesions on bilateral arms and arthralgias since one week (Fig. 1-Part A). He also complained of breathlessness on exertion for the last one month - initially on walking a single flight of stairs, which progressively worsened to breathlessness on minimal exertion over the last week.

On examination, he was tachypnoeic and tachycardic with respiratory distress. He had a
blood pressure of 126/80 mmHg and heart rate of 100/min. Serological investigations revealed leucocytosis with neutrophilic predominance and severe anaemia. Chest radiogram revealed multiple

nodular shadows in both lung fields (Fig. 1, Part B). Contrast Enhanced Computed Tomogram (CECT) of the thorax revealed multiple mediastinal lymph nodes with largest size of 20*13 mm and multiple parenchymal nodules in both lungs (Fig. 1, Part C).

Sputum examination for AFB was negative. Subsequently, broncho-alveolar lavage was carried out which revealed lymphocytic predominance with granulomas. Gene expert and AFB stain of the fluid was positive for Mycobacterium tuberculosis (Fig. 1,

part D). Skin biopsy from the lesion revealed dense neutrophilic infiltration in the reticular dermis. A diagnosis of sweet syndrome was made presenting in association with Pulmonary Tuberculosis.

Patient received anti-tubercular therapy (in accordance with the national guidelines) along with oral steroids for 2 weeks. This led to complete resolution all symptoms within a period of 6 months. This case highlights how tuberculosis may rarely manifest as Sweet Syndrome.

DISCUSSION

Sweet syndrome is a rare condition characterized by the sudden onset of tender erythematous plaques or nodules, often accompanied by fever, arthralgia, and other systemic symptoms1. The diagnosis is primarily based on its typical clinical presentation. Histological examination of the cutaneous lesions reveals a neutrophilic infiltrate in the dermis crucial for establishing the diagnosis2. It frequently affects middle aged adults and is fourfold more common in women3.

Sweet syndrome is idiopathic in around 70% of cases and may be secondary to an underlying condition in 30% of cases4. Common associated conditions include malignancies, infections, inflammatory conditions and drugs. Many haematological malignancies have been associated, including myeloproliferative disorders and multiple myeloma5. It may occur in association with auto-immune diseases like inflammatory bowel disease, rheumatoid arthritis6. Post-infectious sweet syndrome has been described 1 to 3 weeks after upper respiratory and gastrointestinal infections. Other infections like human immunodeficiency virus, hepatitis, tuberculosis have also been reported. Amongst drugs, granulocyte colony-
stimulating factor is most associated. Other drugs include antibiotics, anti-hypertensives, nonsteroidal anti-inflammatory drugs, azathioprine, carbamazepine5. It is also known to
occur after exposure as well as re-exposure to the triggering drug and resolves on withdrawal of the drug with or without concomitant use of steroids5.

It is imperative to rule out underlying malignancy, auto-immune condition or infection when presented with such a clinical scenario. Amongst the infectious triggers, tuberculosis is notorious, as a missed diagnosis may have catastrophic implications. While Sweet syndrome can be associated with pulmonary lesions on its own accord, an inconspicuous tubercular focus should not be overlooked. It is imperative to rule out pulmonary involvement in these patients which may be due to an underlying tubercular focus or a pulmonary manifestation of Sweet Syndrome. Sweet syndrome has a self-limiting course while being exquisitely steroid

responsive. A short course of oral steroids starting at a daily dose of 40 mg to 60 with gradual tapering is adequate.6

Once a diagnosis of Sweet syndrome is established, one must always exclude any underlying trigger or pathology. Complete blood counts with findings of cytopenias, constitutional symptoms, raise the suspicion of malignancy. Age-appropriate cancer screening, should be pursued. Additionally, in

endemic areas tuberculosis being a great asquerader should be excluded.

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Figure_1 Details
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Print Size: 4.8 * 4.44 Inches

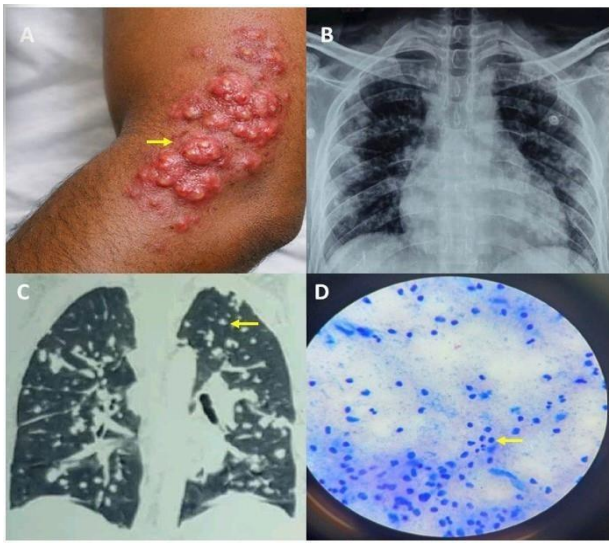

Figure_1 Legends
Multi panelled figure with 4 parts:-Part A reveals multiple papulo-nodular lesions on the extensors (marked with yellow arrow), Part B reveals chest radiograph having multiple reticular opacities in bilateral lung fields, Part C reveals Chest Computed Tomography showing multiple parenchymal nodular shadows (yellow arrow), Part D reveals positive Acid Fast Bacilli under the microscope obtained from the Broncho- alveolar Lavage fluid.