Sweet Syndrome: A Retrospective Analysis of 21 Patients

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ABSTRACT

Sweet syndrome, also known as acute febrile neutrophilic dermatosis, is a rare condition characterised by fever, leucocytosis, and painful skin lesions. This retrospective study analysed 21 patients with Sweet syndrome treated at the Affiliated Hospital of Xuzhou Medical University from January 2015 to June 2022. The study aimed to investigate the aetiology, clinicopathological features, and treatment outcomes. The majority of patients were female, with a median age of 54 years. Upper respiratory tract infection was identified as a common predisposing factor. Histopathological examination revealed neutrophilic infiltration without leucocytoclastic vasculitis. Treatment with glucocorticoids and glycyrrhizin was effective in managing the condition.

Key Words: *Sweet syndrome, Clinical analysis, Treatment, Glucocorticoids*.

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Sweet syndrome, first described by Dr. Douglas Sweet in 1964, is a rare inflammatory condition characterised by the sudden onset of fever, leucocytosis, and painful skin lesions.[1,2] The aetiology of Sweet syndrome remains unclear, but it is often associated with infections, malignancies, and certain medications.[3-6] This study retrospectively analysed 21 patients diagnosed with Sweet syndrome at the Affiliated Hospital of Xuzhou Medical University from January 2015 to June 2022.

The study included patients who met the diagnostic criteria for Sweet syndrome, characterised by the presence of painful erythematous plaques or nodules and histopathological evidence of dense neutrophilic infiltration in the dermis. Patients with incomplete medical records were excluded. Clinical data, including age, gender, predisposing factors, clinical symptoms, laboratory findings, histopathological features, treatment, and outcomes, were collected and analysed (Table I). The study population comprised 4 males and 17 females, with a median age of 54 years (range: 31-64 years). Seventeen patients (80%) reported symptoms of fever, chills, sore throat, and upper respiratory tract infection prior to the onset of skin lesions. The skin lesions were predominantly located on the face, neck, shoulders, back, and limbs, presenting as bright red or dark red nodules or plaques with a diameter of 0.4-12 cm.

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Histopathological examination revealed dense neutrophilic infiltration in the dermis without any evidence of leucocytoclastic vasculitis.

All patients were treated with glucocorticoids, starting with an initial dose of 30-40 mg/day of prednisone. The dosage was gradually reduced after symptom relief, with a treatment course of 12-16 days. Additionally, patients received 60 mL/day of glycyrrhizin for 12-16 days. Follow-up over six months showed that two patients experienced recurrence, which was successfully managed with the same treatment regimen. The study concluded that upper respiratory tract infection is a common predisposing factor for Sweet syndrome. The combination of glucocorticoids and glycyrrhizin was effective in treating the condition. However, the small sample size and retrospective nature of the study are limitations that warrant further research.

Table I: Summary of clinical and histopathological features.

Feature	Number of patients (n = 21)
Gender (male/female)	4/17
Median age (years)	54
Predisposing factors	
Fever, chills, sore throat	17
Upper respiratory infection	17
Skin Lesions	
Location (face, neck, etc.)	21
Type (nodules, plaques)	21
Histopathology	
Neutrophilic infiltration	21
No leucocytoclastic vasculitis	21
Treatment	
Glucocorticoids	21
Glycyrrhizin	21
Recurrence	2

PATIENTS' CONSENT:
Informed consent was obtained from the patients.

COMPETING INTEREST:
The authors declared no conflict of interest.

AUTHORS' CONTRIBUTION:
YW, QL: Conception and design.
PP, RF: Data acquisition and analysis.
GJ: Guidance and supervision.
All authors approved the final version of the manuscript to be published.

REFERENCES

1. Sweet RD. An acute febrile neutrophilic dermatosis. *Br J Dermatol* 1964; **76(8-9)**:349-56. doi: 10.1111/j.1365-2133.1964.tb14541.x.
2. Zelada GM, Aronowitz PB. Fever, rash, pruritus: Sweet syndrome. *Cleve Clin J Med* 2021; **88(7)**:371-3. doi: 10.3949/ccjm.88a.20053.
3. Marzano AV, Ishak RS, Saibeni S, Crosti C, Meroni PL, Cugno M. Autoinflammatory skin disorders in inflammatory bowel diseases, pyoderma gangrenosum and Sweet's syndrome: A comprehensive review and disease classification criteria. *Clin Rev Allerg Immunol* 2013; **45(2)**:202-10. doi: 10.1007/s12016-012-8351-x.
4. Walker DC, Cohen PR. Trimethoprim-sulfamethoxazole-associated acute febrile neutrophilic dermatosis: Case report and review of drug-induced Sweet's syndrome. *J Am Acad Dermatol* 1996; **34(5)**:918-23. doi: 10.1016/S0190-9622(96)90080-8.
5. Nelson CA, Stephen S, Ashchyan HJ, James WD, Micheletti RG, Rosenbach M. Neutrophilic dermatoses: Pathogenesis, Sweet syndrome, neutrophilic eccrine hidradenitis, and Behçet disease. *J Am Acad Dermatol* 2018; **79(6)**:987-1006. doi: 10.1016/j.jaad.2017.11.064.
6. Rochet NM, Chavan RN, Cappel MA, Wada DA, Gibson LE. Sweet syndrome: Clinical presentation, associations, and response to treatment in 77 patients. *J Am Acad Dermatol* 2013; **69(4)**:557-64. doi: 10.1016/j.jaad.2013.06.023.