

SHORT COMMUNICATION

Coinciding Erythema Nodosum and Sweet's Syndrome Without an Apparent Secondary CauseMalvika Ramesh, MD¹, Pranav Ramesh², Richard Hope, MD³¹ Texas Tech University Health Sciences Center, School of Medicine² University of Texas at Dallas, Department of Biology³ Texas Tech University Health Sciences Center, Department of Dermatology**ABSTRACT**

Erythema Nodosum and Sweet's Syndrome are both inflammatory dermatoses with similar causes and treatments. They usually occur independent of each other and when they occur together, a secondary cause such as malignancy or infection may be responsible. We present a patient with both Erythema Nodosum and Sweet's Syndrome who lacked any secondary cause making this presentation quite uncommon.

INTRODUCTION

Sweet's syndrome (Acute febrile neutrophilic dermatosis) is characterized by a quickly developing rash composed of painful erythematous papules or plaques and is often accompanied by fever, joint pain, leukocytosis with neutrophilia, and elevated inflammatory markers such as CRP and ESR.¹ Erythema Nodosum is a form of septal granulomatous panniculitis that is characterized by rapid onset of erythematous painful nodules largely on the pretibial area.^{2,3} Coinciding Sweets and Erythema Nodosum is infrequently reported and often accompanied by another illness, such as malignancy or infection.³⁻⁵ We examine the sequential development of Erythema Nodosum then Sweet's Syndrome in the absence of such.

CASE REPORT

Our patient is a 35-year-old female who presented to the outpatient clinic for "knots" on her bilateral legs which were hot and painful. She noted they had been coming and going for the past few years and recently arose one week prior to coming to the dermatologist. She also noticed painful bumps on her bilateral shoulders which had arose recently and were new to her. She denied any fever. Her only medication was atomoxetine for ADHD. She had no other significant medical conditions or recent illnesses.

On physical exam, annular erythematous ridged plaques were present on bilateral shoulders (**Figure 1**) and a biopsy was taken of her left shoulder. Warm, tender erythematous nodules were seen on bilateral shins consistent with severe erythema nodosum (**Figure 2**). Due to its association with other conditions, infectious causes were suspected such as Streptococcal infection and Tuberculosis. Medication induced, or sarcoidosis were suspected as well.

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Appropriate work up was ordered, and she was started on prednisone 40 mg qd.

She returned 4 weeks later and noted almost complete resolution of her shoulders and legs. Biopsy from the left shoulder was consistent with Sweet's Syndrome. Labs showed elevated CRP at 0.93 and negative ANA as well as negative quantiferon gold. Further, they indicated a neutrophilic leukocytosis. Her chest x-ray was unremarkable.

DISCUSSION

Simultaneous Erythema Nodosum and Sweet's Syndrome is uncommon and when reported in literature, there has usually been a secondary cause such as infection or malignancy.²⁻⁴ Hematologic malignancies have been associated with Erythema Nodosum while Sweet's Syndrome is most commonly associated with AML. Infections associated with both conditions include streptococcal infections, HIV, viral upper respiratory infections, and Tuberculosis.^{6,7} Erythema Nodosum can also arise with autoimmune conditions such as IBD and Sarcoidosis.⁷ Our patients' case did not reveal a secondary cause and she denied any other associated symptoms. Her ANA was negative making autoimmune processes less likely. Chest xray was within normal ruling out any cardiopulmonary infection such as Tuberculosis or signs of pulmonary sarcoidosis. A streptococcus throat swab was negative as well. Quantiferon gold did not reveal any current or previous Tuberculosis infection. CBC showed a mild neutrophilic leukocytosis but no pancytopenia or concern for hematologic malignancy.

The distribution of our patient's lesions along with pathology results confirm co-existing

Erythema Nodosum and Sweet's Syndrome. Neutrophilic leukocytosis and elevated inflammatory marker are consistent with the clinical picture.⁵ Further, improvement with steroids was appropriate.³ There was no apparent cause of her dermatoses making this case rare.

Sweet's Syndrome and Erythema Nodosum resemble each other clinically and histologically.⁵ Further, they have similar causes including malignancy, infection, and autoimmune conditions and both respond rapidly to steroids.⁵ However, while Sweet's syndrome occurs on upper parts of the body, erythema nodosum is present on pretibial region.^{1,3} On pathology, erythema nodosum and Sweet's syndrome both have an inflammatory cell infiltrate. They differ in that erythema nodosum has inflammatory cells and granulomas in deeper levels of skin while Sweet's syndrome has a neutrophilic infiltrate in the upper dermis.³ Clinicians should be aware of these concurrent pathologies when presented with a patient featuring lesions on upper body and shins, and while there may be a secondary cause, our case illustrates it is not necessary.

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Figure 1. Annular scaly plaque seen on patient's right shoulder.



Figure 2. Tender erythematous nodules seen on patient's pretibial region consistent with erythema nodosum.