DRUG INDUCED SWEET SYNDROME MASQUERADING AS ACUTE MYELOBLASTIC LEUKEMIA

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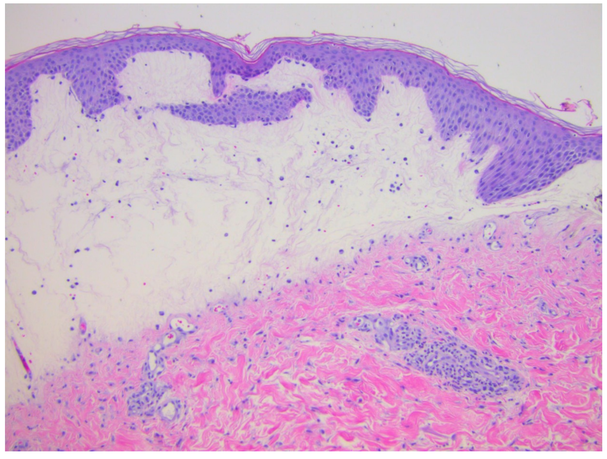
INTRODUCTION

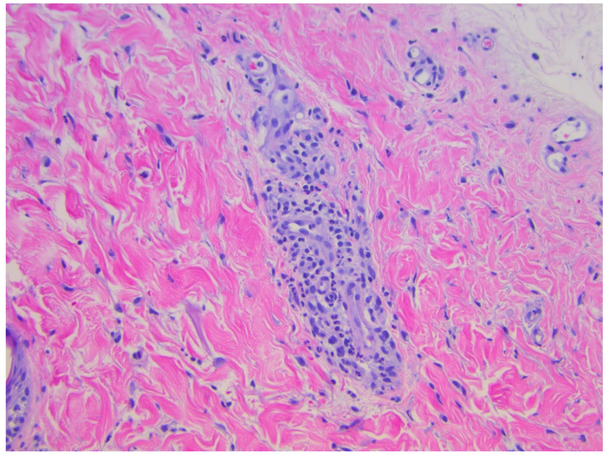
Acute febrile neutrophilic dermatosis is a syndrome of fever, leukocytosis, erythematous skin lesions with neutrophilic skin infiltration associated with malignancy, drugs, inflammatory bowel disease or recent respiratory or gastrointestinal infection.
We report a classical case of drug induced Sweet syndrome(SS) associated with topical tretinoin.

CASE DESCRIPTION

24 year old female with PMH of acute myeloblastic leukemia(AML) in remission status post cytarabine consolidation treatment 2 years prior presented with high grade fever, headache, arthralgias, myalgias and upper body rash. Physical exam showed oropharyngeal mucositis and tender erythematous nodular lesions on face, back, and extremities. Lab data showed white cell count 17000 with neutrophilic predominance (94%). Patient was admitted for sepsis in the ER and started on broad spectrum antibiotics. Patient denied any respiratory or genitourinary signs and symptoms. Pregnancy test was negative. Extensive work up done during hospital course didn't reveal a focus of infection so antibiotics were discontinued. Lumbar Puncture was benign, Urine and Blood cultures showed no growth, xray chest didn't show any infiltrates. HSV, CMV and EBV serology, RPR, HIV and viral respiratory panel were negative. Inflammatory markers were high ESR 75, CRP 40. US Abdomen showed hepatosplenomegaly. Autoimmune panel was normal. Peripheral smear, flow cytometry and Bone marrow(BM) biopsy didn't show any morphological and immunophenotypic abnormalities concerning for AML.



Papillary dermal edema and neutrophil infiltration



Dermal neutrophil infiltration and inflammation

Patient reported she has been recently using an acne cream containing tretinoin. Left forearm skin biopsy was taken and patient was started on topical and oral steroids for clinical suspicion of SS with dramatic improvement in both fever and rash. Skin biopsy later on confirmed papillary dermal edema and neutrophilic infiltrates consistent with SS. Patient was discharged home in stable condition on tapered dose of prednisone.

DISCUSSION

Our patient met all criteria for diagnosis including fever, painful erythematous skin lesions and skin biopsy showing neutrophilic infiltrates. The temporal relationship with drug initiation with onset of symptoms and resolution of symptoms after stopping drug and use of steroids are important clues to diagnosis of drug induced SS. Pt also met classical lab criteria of elevated ESR, CRP and leukocytosis with neutrophilic predominance. AML was ruled out by peripheral smear, flow cytometry, and BM which did not show any morphological evidence of AML. Patient was counselled to avoid tretinoin in future to prevent flares.

CONCLUSION

SS should be considered in the differential diagnosis of patients presenting with acute febrile illness and rash. This case explains the importance of malignancy work up in SS however highlights the fact that a preexisting underlying condition associated with SS should not exclude the possibility of drug induced SS and physicians should look for recent introduction of new medications.

REFERENCES

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