Supplementary Online Content

Sanchez IM, Lowenstein S, Johnson KA, et al. Clinical features of neutrophilic dermatosis variants resembling necrotizing fasciitis. *JAMA Dermatology.* Published online October 31, 2018. doi:10.1001/jamadermatol.2018.3890

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. New Cases of Necrotizing Neutrophilic Dermatosis Misdiagnosed As Necrotizing Fasciitis in San Francisco, CA; Portland, OR; Minneapolis, MN

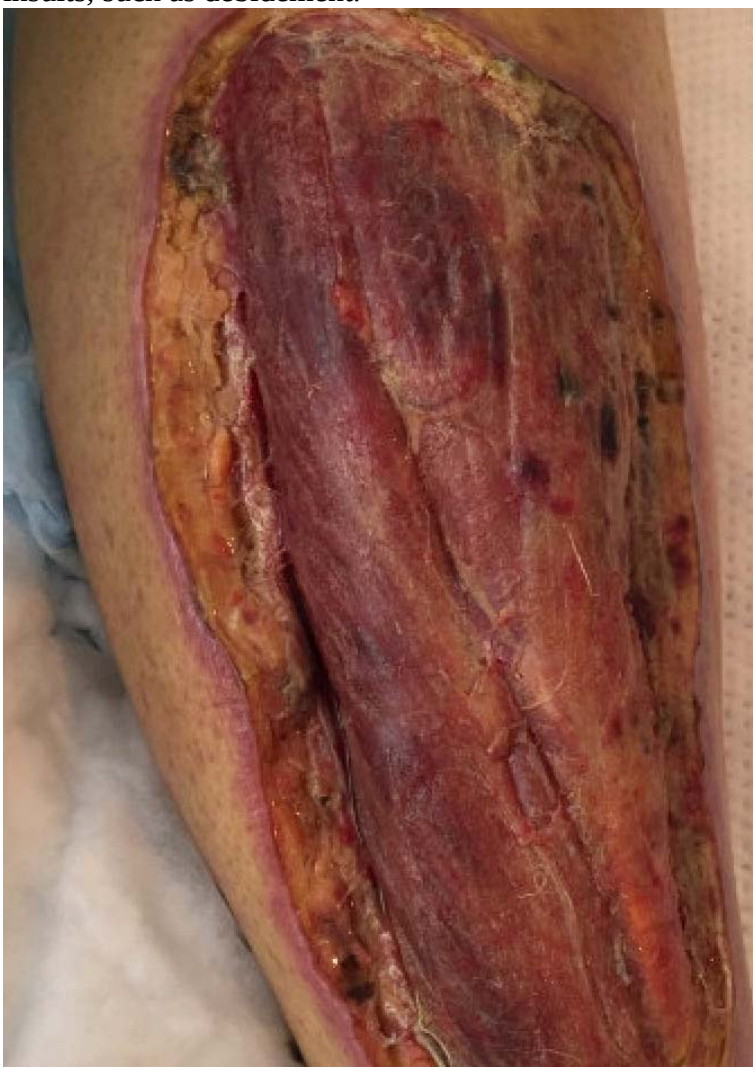
Case, Year	Age, Gender	Initial insult	Co-morbidities	Site	Class	Clinical features	Histology	Imaging	Key Lab Findings	Treatment
Case 1, 2017	43, M	None	Drug abuse (methamphetamines)	Leg	PG	- Ulcerated, purpuric skin plaques - Violaceous, undermined borders - Satellite lesions: flank, back	Ulcerative, dense neutrophilic dermatitis	None	- Culture: negative - WBC: 42,000/μL - CRP: 250mg/L - fever, shock	Antibiotics Debridements **Amputation** Systemic corticosteroids
Case 2, 2017	69, M	None	MDS	Leg	NSS	- Erythematous, tender plaque - Nodular violaceous center - Surrounding pitting edema - Post-debridement: ulcer with violaceous border and bleeding base extending to muscle	- Subcutaneous necrosis - Inflamed and necrotic skeletal muscle - Muscle fascicles with multinucleated myocytes, neutrophils - Fascia with fibrin deposition and extravasated erythrocytes with widening fibrous septa	U/S: - soft tissue swelling - without abscess or fluid collection	- Culture: negative - WBC: 5,900/μL - Temperature: 39°C - tachycardia, shock	Antibiotics Debridement Systemic corticosteroids IVIG
Case 3, 2017	69, M	None	MDS	Face	NSS	- Erythematous, violaceous, edematous plaque - Admixed areas of necrosis and eschar formation - Overlying yellow-brown thick crust	- Dense, neutrophilic dermal infiltrate - Marked papillary dermal edema - Slight overlying dermal vesiculation	CT: - soft tissue swelling - extension into soft tissue & scalp - adenopathy	- Culture: *S. hominis*, coagulase negative *Staphylococcus, Candida albicans* - WBC: 35,000/μL - Temperature: 40°C - fever, tachycardia, shock, shock	Antibiotics Debridement Systemic corticosteroids
Case 4, 2016	65, F	None	Essential thrombocytosis, hypothyroidism, CKD	Breast	PG	- Non-pustular, non-tender nodule - Satellite lesions: elbow, buttocks	Dense infiltration of polymorphonuclear neutrophils involving the dermis, subcutaneous fatty tissue and skeletal muscle	None	- Culture: negative - WBC: 49,000/μL - CRP: 14mg/L - Temperature: 38°C	Antibiotics Debridements Topical steroids Systemic corticosteroids Mycophenolic acid
Case 5, 2016	32, M	None	History of DVT	Buttocks	PG	- Pustule - Painful, erythematous nodule	Ulcerative, dense neutrophilic dermatitis	CT: normal	- Culture: negative - WBC: 37,000/μL - Temperature: 40°C - shock	Antibiotics Debridements
Case 6, 2015	67, M	Abrasions s/p MVA	Clotting disorder, DM2, kidney	Foot	PG	- Ulcer w violaceous border - Bullae with sloughing	- Ulcerative, dense inflammation of the skin and subcutaneous tissue	None	- Culture: negative - WBC: 33,000/μL - Temperature: 39°C	Antibiotics Debridements **Amputation**

			failure, HTN			- Satellite lesions: leg (purple discoloration 2 weeks after insult)	- Subcutaneous abscess formation and fat necrosis - Margins viable though mildly inflamed			Systemic corticosteroids MMF Steroid injection Topical gentamicin

CKD, chronic kidney disease; CRP, c-reactive protein; CT, computerized tomography; DM2, DVT, deep vein thrombosis; DM2, diabetes mellitus type 2; ESR, erythrocyte sedimentation rate; F, female; HTN, hypertension; IVIG, intravenous immunoglobulin; M, male; MDS, myelodysplastic syndrome; MMF, mycophenolate mofetil; MVA, motor vehicle accident; NF, necrotizing fasciitis; NSS, necrotizing Sweet syndrome; PG, pyoderma gangrenosum; *S.*, *Staphylococcus*; s/p, status post; U/S, ultrasound; WBC, white blood cell count

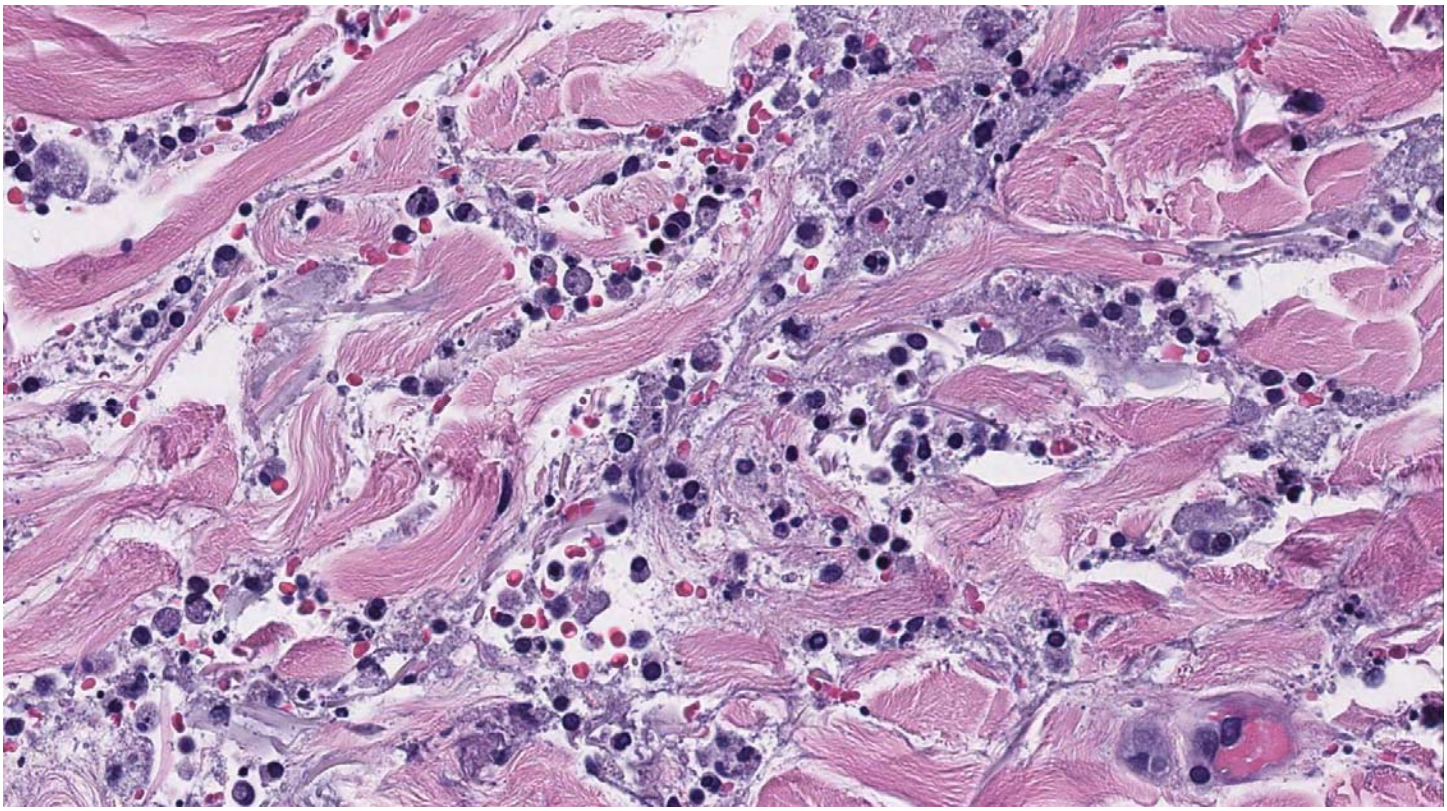
eFigure 1. Necrotizing Sweet Syndrome Morphology Mimicking PG

Violaceous margins, surrounding warmth, and necrotic skin and/or tissue in NSS typically follow pathergic insults, such as debidement.

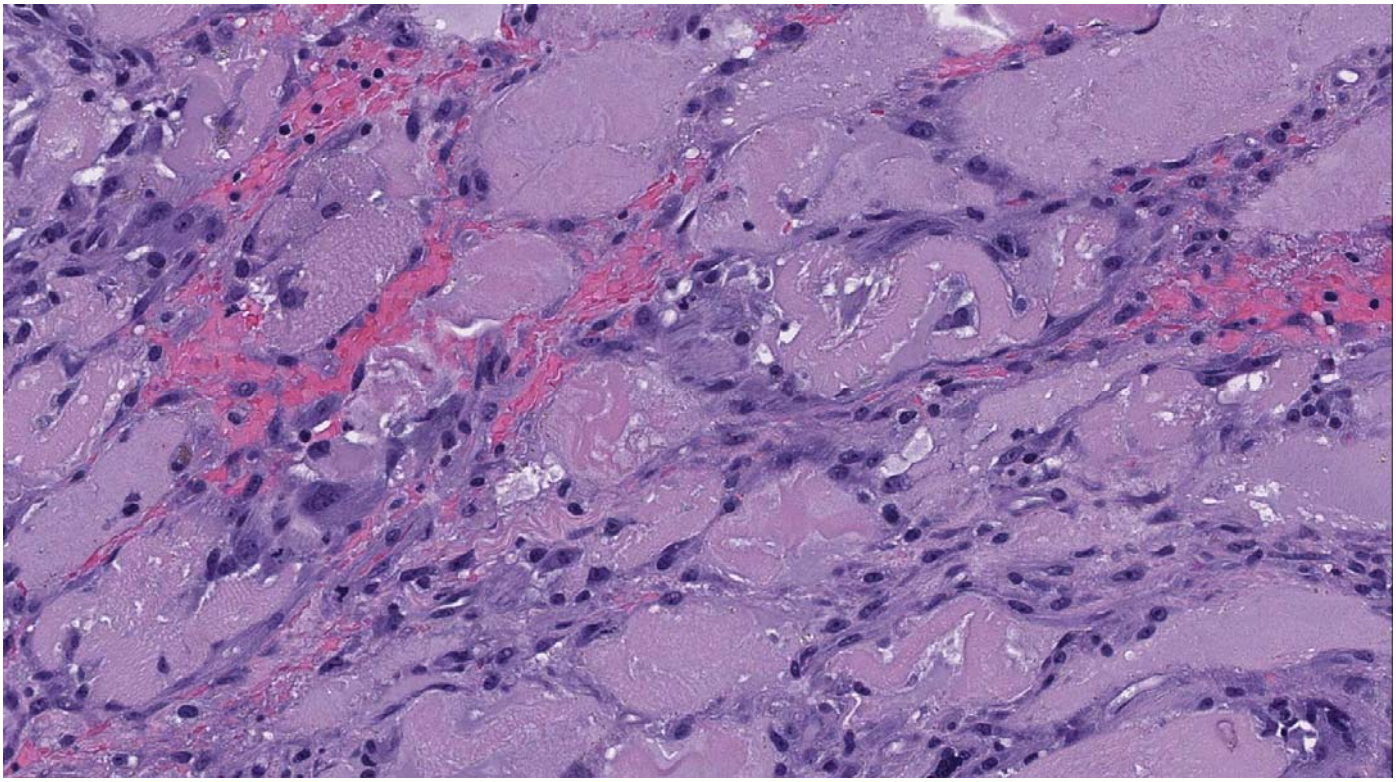


eFigure 2. Necrotizing Sweet Syndrome Histopathology

A diffuse infiltrate of neutrophils and karyorrhectic debris arrayed throughout the papillary and superficial reticular dermis. (Hematoxylin and eosin (H&E) stain, original magnification x 400).



eFigure 3. Necrotizing Sweet Syndrome Histopathology
Surgical debridement of the leg tissue demonstrated an acute inflammatory infiltrate in the muscle and subcutaneous fat involvng the fibrous septa and lipocyte lobules without involving the dermis or epidermis, diagnosed as septal and lobular panniculitis. (H&E stain, original magnification x 250).



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