

Supplementary 1: differential diagnosis and investigation of main neutrophilic dermatoses.

Neutrophilic dermatoses	Differential diagnosis	Investigations Microbiology Pathology Biologic test Medical history Imagery
Subcorneal pustular dermatosis	<ul style="list-style-type: none"> . Infection: Impetigo, dermatophytosis, candidiasis . Pustular psoriasis . Acute generalized exanthematous pustulosis . Aseptic pustulosis of the folds . Eosinophilic pustular folliculitis . Pemphigus foliaceus . Dermatitis herpetiformis . <i>IgA pemphigus</i> ? 	<ul style="list-style-type: none"> . swab, biopsy: positive direct and culture . more epidermal spongiosis . drug exposure history . lupus history, antinuclear antibodies + . eosinophil-predominant infiltrates . major acantholysis, . blister formation within the dermal papilla . desmocollins antibodies +
Aseptic pustulosis of the folds	<ul style="list-style-type: none"> . Subcorneal pustular dermatosis . <i>Other differential diagnosis: idem that Subcorneal pustular dermatosis</i> 	<ul style="list-style-type: none"> . presence of follicular involvement, absence of lupus history, antinuclear antibody – . See Subcorneal pustular dermatosis
Sweet Syndrome	<ul style="list-style-type: none"> . Infection (bacteria, fungi, or atypical mycobacteria) . Insect bites . Urticaria . Vasculitis . Sarcoidosis . Erythema nodosum . Leukemia cutis . Myelodysplasia cutis . Cutaneous lymphoma 	<ul style="list-style-type: none"> . biopsy: positive direct and culture (one punch biopsy per laboratory) . history of bite, eosinophil-predominant infiltrates . appearing, rapidly enlarging, and disappearing within 24h . endothelial wall necrosis, antinuclear antibodies + . presence of noncaseating granulomas . septal panniculitis . blastic cells infiltrate . infiltration by myeloid cells with pseudo-pelger-Huet, myeloperoxidase + . infiltration by lymphoma cells
Neutrophilic eccrine hidradenitis	<ul style="list-style-type: none"> . Sweet syndrome . Drug reaction . Erythema nodosum . Vasculitis . Urticaria . Infectious eccrine hidradenitis 	<ul style="list-style-type: none"> . no predominant neutrophilic infiltrate around eccrine gland . drug exposure history . lobular panniculitis . endothelial wall necrosis . absence of neutrophilic infiltrate . swab, biopsy: positive direct and culture
Pyoderma gangrenosum	<ul style="list-style-type: none"> . Infection (pyogenic, ecthyma gangrenosum, botryomycosis, deep mycosis, leishmaniasis) 	<ul style="list-style-type: none"> . biopsy: positive direct and culture (one skin sample per microbiology laboratory)

	<ul style="list-style-type: none"> . Vasculitis . Venous ulcer . Arterial ulcer . Vascular occlusive disease . Ulcerative skin cancer . Ulcerative cutaneous lymphoma . Necrobiosis lipoidica . Hydroxyurea-induced ulcer 	<ul style="list-style-type: none"> . endothelial wall necrosis, ANCA +, cryoglobulinemia + . venous ultrasonography assesses reflux and obstruction . ankle-brachial index testing . thrombi in dermal vessels, antiphospholipid antibodies +, cryoglobulinemia +, cryofibrinogenemia + . infiltration by epithelial / melanocytic tumor cells . lymphoma cells infiltrate . presence of interstitial granulomas . hydroxyurea exposure history
Erythema Elevatum Diutinum	<p>Early phase:</p> <ul style="list-style-type: none"> . Sweet syndrome . Extrafacial granuloma faciale . Rheumatoid neutrophilic dermatosis . Palisaded neutrophilic granulomatous dermatosis <p>Late phase:</p> <ul style="list-style-type: none"> . Tuberous xanthomas . Multicentric reticulohistiocytosis . Rheumatoid nodules 	<ul style="list-style-type: none"> . absence of leukocytoclastic vasculitis . eosinophil-predominant infiltrates . dense neutrophilic dermal infiltrate without vasculitis . presence of interstitial granulomas . foamy cells and cholesterol clefts . multinucleated giant cells with eosinophilic granular cytoplasm . central area of necrosis surrounded by palisading macrophages
Neutrophilic panniculitis	<ul style="list-style-type: none"> . Infective Panniculitis . Pancreatic panniculitis . α1-antitrypsin deficiency-associated panniculitis . Early erythema nodosum . Erythema induratum 	<ul style="list-style-type: none"> . biopsy: positive direct and culture (one sample per laboratory) . elevated lipase levels, pancreatitis on CT scan . low α1-antitrypsin levels . lobular panniculitis . positive IFN-γ release assay, positive mycobacterial DNA PCR
Neutrophilic Urticarial Dermatitis	<ul style="list-style-type: none"> . Neutrophilic urticaria . Urticarial vasculitis . Sweet syndrome 	<ul style="list-style-type: none"> . absence of leukocytoclasia . presence of leukocytoclastic vasculitis . denser dermal neutrophilic infiltrate and presence of dermal edema