Dermatology Case Studies: No conflicts of interest

I will be discussing some off-label treatment options

Pascal Ferzli, MD, FAAD
Dermatology Case Studies:

Source of pictures and data sources:

Dermnetnz.org : a fantastic resource for Primary Care Providers and Dermatologists

University of Washington St Louis Dermatology Monthly Cases

Hong Kong Journal of Dermatology

Dermatology Oasis

Journal of the American Academy of Dermatology
Dermatology Case Studies: Let’s discuss together

I will need your input: any answers are appreciated!

Pascal Ferzli, MD, FAAD
Dermatology Case Studies:

I chose cases that appear regularly in my clinic, many of which are consultation requests from Primary Care Providers.
Dermatology Case Studies:

1) VASCULAR
2) INFECTIOUS
3) TRAUMATIC
4) AUTOIMMUNE
5) METABOLIC
6) IDIOPATHIC/IATROGENIC
7) NEOPLASTIC
8) CONGENITAL
1) VASCULAR
2) INFECTIOUS
3) TRAUMATIC
4) AUTOIMMUNE
5) METABOLIC
6) IDIOPATHIC/IATROGENIC
7) NEOPLASTIC
8) CONGENITAL
Scenario 1:

57 yo with a 1 year history of a very pruritic rash of bilateral feet.

Works outdoors year round

No other rashes

OTC antifungal creams with slight improvement
Scenario 1:

Differential Diagnosis?

Next Steps?

Treatment Options?

Mocassin Distribution
Scenario 2:

57 yo with a 1 year history of a somewhat pruritic rash of bilateral feet.

Works outdoors year round

No other rashes

OTC antifungal creams with slight improvement
Scenario 2:

Does that change your approach?

What if: patient has been using antifungal creams for a year with no improvement?
**Rubber**
Rubber accelerators are chemicals used to speed up the manufacturing process of rubber. Nearly all rubber compounds contain rubber accelerators.

**Leather**
- Dimethyl fumarate (DMF) is a potent allergen found in sachets found in shoe boxes. It prevents mould growth of leather shoes but in doing so permeates the leather.
- Chromates such as potassium dichromate used in leather tanning can be a problem particularly if the feet perspire as sweat leaches out the chromates.
- Formaldehyde is used in the tanning of white leather shoes in ‘white kid’ and ‘new bucks’

**Other causes**
- Dyes, particularly paraphenylenediamine (PPD)
- Glues such as para-tertiary butylphenol formaldehyde resin and colophony
- Metal components such as buckles or decorations that come into direct skin contact. Nickel and cobalt are the common allergens.
Scenario 3:

57 yo Alcoholic Male with a History of Drug Use

2 year history of worsening rash on legs and feet

Itchy, Scaly
Scenario 3:

Next Steps?

BW?

Treatment? Treat the underlying cause.

Treat with topical steroids for symptomatic temporary relief
Scenario 4:

57 yo Male with a 1 year history of a worsening itchy rash on bilateral feet.

Not responsive to potent topical steroid creams or topical antifungal creams.

Biopsy shows psoriasiform changes, nonspecific.

15 pound unexplained weight loss in the past year.
Scenario 4:

Weight loss?

What is the suspicion? Paraneoplastic process!
Scenario 5:

57 yo male with 3 week history of bilateral foot rash, in conjunction with ocular changes (conjunctivitis) and tender joints.
Scenario 5:

Arthritis? How does that change the differential?

Causes?

GI or GU or STD

Chlamydia, Shigella, Salmonella, Yersinia, etc.

Treat the underlying cause!

Reactive Arthritis, Urethritis, Conjunctivitis: triad
1) VASCULAR
2) INFECTIOUS
3) TRAUMATIC
4) AUTOIMMUNE
5) METABOLIC
6) IDIOPATHIC/IATROGENIC
7) NEOPLASTIC
8) CONGENITAL
Scenario 1:

48 yo Male with 3 day history of bilateral leg rash

“Palpable” raised lesions
Scenario 1:

Patient is taking an antibiotic for an unrelated infection.

In the context of palpable purpura: diagnosis is more clear.
Scenario 2:

48 yo Male just finished running a marathon for the first time develops this bilateral rash.

Diagnosis?

Treatment?
Scenario 3:

48 yo Male with a week history of a worsening bilateral leg rash. Lesions are palpable purpuric.

Patient noted some changes in the color of his urine: darker.

He has an upset stomach as well.

Suspicion?
Scenario 4:

48 yo Male, otherwise healthy, presents with a 3 week history of bilateral nonpalpable asymptomatic rash on the legs and feet.

No significant preceding event.

No meds, no drug use.

Exam unremarkable.

Diagnosis?
Scenario 5: ****Important Scenario

48 yo Alcoholic Male

2 year history of asymptomatic rash on legs

2 week history of swelling of legs and ankles

Bleeding gums

No meds, Denies drug use
Left leg biopsy showed normal epidermis, with superficial perivascular inflammatory infiltrate composed of lymphocytes, histiocytes, occasional plasma cell and eosinophils. There was no evidence of leukocytoclastic vasculitis. No perifollicular fibrosis or follicular plugging was noted.

**Labs**

Plasma Ascorbic Acid level <0.1 (normal range of 0.6-2.0)
Symptoms can be preceded by lassitude, weakness, irritability, weight loss, and vague myalgias and arthralgias. Skin findings include perifollicular hyperkeratotic papules, corkscrew hairs, splinter hemorrhages of the nails, perifollicular hemorrhages, purpura, and ecchymoses. Other common findings include: gum swelling, friability, bleeding, mucosal petechiae; and pale conjunctiva. Conjunctival hemorrhage, flame-shaped hemorrhages, and cotton-wool spots may be seen. Systemic effects include high-output heart failure due to anemia and submucosal hemorrhages in gastrointestinal tract. Anemia develops in 75% of patients, secondary to multiple factors including altered absorption of iron and folate, gastrointestinal blood loss, and intravascular hemolysis. Bleeding in the muscles and joints which can be quite painful, has been observed.
54 y/o white male presents from an outside hospital with a one-week history of fever, weakness, and cough followed by a rash. The patient was initially treated with antibiotics for possible pneumonia, with no improvement in symptoms.

PMH: Hypertension

Meds: Lisinopril

FH: Noncontributory

Blood, sputum, and urine cultures were negative.

Serologies were negative for HIV, VZV, HSV, histoplasmosis, blastomyces, bartonella, legionella, Q-fever, rickettsia, ehrlichiosis.
Skin biopsy revealed a dense, predominantly superficial, dermal infiltrate of neutrophils (Figure 4). Stains for organisms, including GMS, AFB and tissue gram, were performed and no fungal, mycobacterial or bacterial organisms were seen.

Sweet's syndrome is a rare neutrophilic dermatosis associated with fever, leukocytosis, and erythematous plaques with neutrophilic infiltrates. Cutaneous plaques, papules, and vesicles may be several centimeters in diameter, and may be painful. They can occur anywhere on the body but have a predilection for the face and limbs.

Associated medical conditions include malignancy, bacterial and viral infections, autoimmune disease, collagen vascular disease, inflammatory bowel disease, sarcoidosis, pregnancy, and medications (G-CSF, furosemide, hydralazine, oral contraceptives, lithium, carbamazepine, bactrim, minocycline). Approximately 20% of cases are associated with underlying malignancy, most commonly AML and myelodysplastic disease.

The 2 major criteria are acute onset of typical rash and histopathology of mature neutrophils in the mid and upper dermis. The histopathology may also include mature neutrophils that migrate transepidermally to create pustules. Vessel walls are classically spared. The 4 minor criteria include 1) antecedent fever or infection, 2) accompanying fever, arthralgia, conjunctivitis, underlying malignancy, 3) leukocytosis, 4) response to corticosteroids but no response to antibiotics.
Treatment of Sweet's syndrome is prednisone 40-60 mg daily for 1 week, tapered over 3-4 weeks. Corticosteroids typically lead to resolution of all symptoms, but recurrence rates have been reported to be as high as 25-70%. Repeated relapses may require steroid-sparing drugs such as NSAIDs, dapsone, colchicine, metronidazole, doxycycline, methotrexate, cyclosporin, and potassium iodide.
65 yo Female

“Itchy all over”
1) VASCULAR
2) INFECTIOUS
3) TRAUMATIC
4) AUTOIMMUNE
5) METABOLIC
6) IDIOPATHIC/IASTROGENIC
7) NEOPLASTIC
8) CONGENITAL
Scenario 1:

65 yo female with a 3 year history of this pruritic rash on her shoulders and arms.

She has a history of neck and upper back pain following a car accident.

Has undergone neck surgery

Suspicion?

Treatment?
Scenario 2:

65 yo Female with a 3 year history of this pruritic rash on her trunk and extremities.

She tells you she has “parasites” that burrow through her skin and shows you “evidence” in a small box she brought with her. The box in question contains dead skin and strands of fabric.

Clinical Suspicion?

Treatment?
Scenario 3:

65 yo Alcoholic Female with a 3 months history of a very pruritic total body rash.

On physical examination, her stomach appears swollen.

Clinical Suspicion?

Treatment?
Scenario 4:

65 yo Female with a history of IV heroin use, presents with a 6 months history of a very pruritic rash on her trunk and extremities.

Clinical Suspicion?

Treatment?
Scenario 5: *****Most Important Scenario

65 yo Female with a 6 months history of whole body pruritus.

Patient has an unexplained 15 pound weight loss in the past year.
Age appropriate malignancy screening:
Mammogram
Colonoscopy
CBC, CMP, CA19-9, CA125
Chest Xray
SPEP, UPEP
Full Skin Exam

ANA, SSA, SSB
Hepatitis workup (hep A, B, C)
TSH, free T4
Iron, TIBC, ferritin
Urinalysis with reflex culture
Idiopathic Pruritus: not uncommon

Remember Meds/Drugs
Causes

- Uremic Pruritus
- Hepatitis
- UTI
- Iron Deficiency
- Thyroid dysfunction
- Malignancy
Treatment

Topicals: Pramoxine, Capsaicin, Menthol

Oral: Hydroxyzine, Benadryl, Prednisone

Field Therapy: Narrow Band UVB phototherapy is very effective! 4 weeks for significant improvement
Presentation
Scenario 1:

25 yo otherwise healthy Female

3 week history of a tender rash on the face

Sun exposure makes it worse.

History of oral ulcers, joint pain.

Clinical Suspicion?

Treatment?
Scenario 2:

25 yo otherwise healthy Female

2 year history of a rash on the face

Sun makes it worse. No systemic symptoms. Exam unremarkable.

Clinical Suspicion?

Treatment?
Scenario 3:

25 yo otherwise healthy Female

3 day history of rash following the use of a depilatory cream on face.

Clinical Suspicion?

Treatment?
Scenario 4:

25 yo otherwise healthy Female

6 months history of a rash on the face

Was put on Mirena IUD about a year ago

Clinical Suspicion?

Treatment?
Scenario 5:

25 yo otherwise healthy Female

6 months history of a rash on the face

Recent weight gain, hirsutism (unwanted hair growth)

Clinical Suspicion?
BW?

Treatment?
Hormonal workup:

- FSH
- LH
- Free testosterone
- DHEA-S
- Androstenedione
- 17 OH progesterone
- Prolactin

Beta-HCG? sure
Treatment:

Gentle cleansers
Erythromycin gel
Clindamycin gel
Azeleic acid
Oral antibiotics (beware of photosensitivity)

Decrease dairy, whey protein
42 yo otherwise healthy Male

2 week old spreading itchy rash

Patient feels fine
Scenario 1:

Patient had a sore throat for 2 weeks prior to the rash.

Describe the back lesions

Differential discussion
Scenario 1:
What is the next step?
ASO
Anti-DNAse B
Throat Culture (too late?)
Biopsy?
Scenario 1:

Treatment approach:

Topicals?

Oral Antibiotics?

Systemic Therapies

NBUVB
Scenario 2: Patient had one large lesion, then the others appeared. Occasionally itchy. Differential?
Scenario 2:

Biopsy?
HHV6 testing?
Treatment?
Scenario 2: Treatment options

7-day course of high-dose acyclovir

A 2-week course of oral erythromycin has also been reported to help, probably because of a nonspecific anti-inflammatory effect. Other studies have found that erythromycin and azithromycin are not effective in pityriasis rosea.

Topical steroid cream or ointment may reduce the itch while waiting for the rash to resolve.

Extensive or persistent cases can be treated by phototherapy (ultraviolet light, UVB).
Scenario 3:
Hand and Foot involvement
Differential?
Scenario 3:

Next steps?

Testing?

Treatment

Benzathine penicillin G 2.4 million units intramuscularly (IM) in a single dose

PCN allergic: Doxycycline, Erythromycin, Ceftriaxone, Azithromycin.
41 yo Male

2 months history of a rash on his right dorsal hand

Looked like “ringworm”

Only occasionally itchy

Keeps spreading, despite using OTC antifungal creams

No other lesions
1) VASCULAR
2) INFECTIOUS
3) TRAUMATIC
4) AUTOIMMUNE
5) METABOLIC
6) IDIOPATHIC/IATROGENIC
7) NEOPLASTIC
8) CONGENITAL
Options to consider include:

- Topical corticosteroid ointment under occlusion
- *Intralesional steroid injections*
- Destruction by cryotherapy or laser ablation
- Imiquimod cream
- Topical calcineurin inhibitors (tacrolimus and pimecrolimus)
Granuloma Annulare

Association with Diabetes Mellitus or Thyroid Disease

Need to check yearly, as it may be a precursor lesion
28 yo Healthy Female

4 week history of worsening facial rash

Itchy, burns. Not painful

Tried a new OTC toothpaste 4 weeks ago: No other skin regimen changes.
Used HC for 2 days: temporary relief, then it got worse.
Used Neosporin for 3 days: slight improvement

History of “sensitive skin” and occasional “acne”
1) VASCULAR
2) INFECTIOUS
3) TRAUMATIC
4) AUTOIMMUNE
5) METABOLIC
6) IDIOPATHIC/IATROGENIC
7) NEOPLASTIC
8) CONGENITAL
Same Condition
Treatment Approach?

How about topical steroids?

Oral steroids?

Reminder about topical steroids on face.
This mainly affects adult women aged 15 to 45 years. It is less common in men. It may affect children of any age.

Periorificial dermatitis may be induced by:

- Topical steroids, whether applied deliberately to facial skin or inadvertently
- Nasal steroids, steroid inhalers, and oral steroids
- Cosmetic creams, make-ups and sunscreens
- Fluorinated toothpaste
- Hormonal changes and/or oral contraceptives
Treatment

- Erythromycin
- Clindamycin
- Metronidazole
- Pimecrolimus
- Azelaic acid

In more severe cases, a course of oral antibiotics may be prescribed for 6–12 weeks.

- Most often, a tetracycline such as doxycycline is recommended. Sub-antimicrobial dose may be sufficient.
- Oral erythromycin is used during pregnancy and in pre-pubertal children.
Differential Diagnosis

Outside IN? Or Inside OUT?

Factitial?

1) VASCULAR
2) INFECTIOUS
3) TRAUMATIC
4) AUTOIMMUNE
5) METABOLIC
6) IDIOPATHIC/IATROGENIC
7) NEOPLASTIC
8) CONGENITAL
Scenario 1:

40 yo Female

Onset: 5 days ago
Location: Lesions on legs bilaterally

Start out as “pimples” shortly after swimming in a pool that was later closed for “sanitary reasons.”

Clinical Suspicion?

Treatment?
Scenario 2:

40 yo Female with a 1 year history of this nonhealing lesion.

She is a transplant patient.

No other similar lesions,

Clinical Suspicion?

Treatment?
Scenario 3:

40 yo Female with a history of leg swelling and varicose veins presents with a 1 year history of this enlarging lesion over the medial malleolus.

Clinical Suspicion?

Treatment?
Scenario 4:

40 yo Female with diabetes presents with a 1 year history of this asymptomatic lesion on the plantar surface of the left foot.

Clinical Suspicion?

Treatment?
Scenario 5: *****Most Important Scenario

40 yo Female

Onset: 4 weeks ago
Location: Lesions on legs bilaterally

Start out as “pimples” or “pus” bumps
Painful

Recurrent severe Diarrhea, upset stomach
Scenario 5:

**Common presentation: Pathergy**

Patient undergoes several rounds of debridement by wound care, only to see the wound get larger and larger.
Rapid progression of painful, necrolytic, cutaneous ulcer with an irregular, violaceous and undermined border

**Pyoderma Gangrenosum is a diagnosis of Exclusion**

ALL OTHER CAUSES have to be ruled out first: Including infectious, vascular, neoplastic,...etc.

At least 2 punch biopsies, one for H&E (microscopy), one for pan cultures (Bacterial, Fungal, Mycobacterial)

Where to biopsy? How?
Treatment is ALWAYS NONSURGICAL!!!

Small ulcers are best treated with:

- Potent topical steroid creams
- Tacrolimus ointment
- Intralesional steroid injections
- Special dressings
- Oral anti-inflammatory antibiotics such as doxycycline or minocycline
- If tolerated, careful compression bandaging to reduce swelling
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- Intraleisonal steroid injections
- Special dressings
- Oral anti-inflammatory antibiotics such as doxycycline or minocycline
- If tolerated, careful compression bandaging to reduce swelling
Systemic treatment for larger ulcers due to pyoderma gangrenosum may include:

- Oral prednisone for several weeks or longer, or intermittent intravenous methylprednisolone for 3–5 days
- Cyclosporine
- Anti-TNFα inhibitors: infliximab, adalimumab or etanercept (off-label)
Pyoderma gangrenosum is an uncommon disease that affects males and females of any age, but is more common in those aged over 50 years. It is thought to be a reaction to an internal disease or condition. Known associations include:

- Inflammatory bowel disease (ulcerative colitis and Crohn disease)
- Rheumatoid arthritis
- Myeloid blood dyscrasias including leukemia
- Monoclonal gammopathy (usually IgA)
- Chronic active hepatitis
- Granulomatosis with polyangiitis
- PAPA syndrome
- Use of levamisole-adulterated cocaine
- Miscellaneous less common associations
Metastatic Crohn’s

Cutaneous disorders are commonly associated with Crohn's disease, reported in up to 15%. Perianal, perifistular, and peristomal inflammation are the most common cutaneous manifestations of Crohn's disease. Infrequently, patients have pyoderma gangrenosum, erythema nodosum, and cutaneous polyarteritis nodosa. Rarely, patients may develop granulomatous dermatitis at locations remote from the gastrointestinal tract, termed metastatic Crohn's disease. Few cases have been reported in the literature, but the condition may be more common as cutaneous lesions are often misdiagnosed.
Presentation

Umbilical lesion
1) VASCULAR
2) INFECTIOUS
3) TRAUMATIC
4) AUTOIMMUNE
5) METABOLIC
6) IDIOPATHIC/IASTROGENIC
7) NEOPLASTIC
8) CONGENITAL
Scenario 1:

37 yo Healthy Female

1 week history of an enlarging tender lesion of the umbilicus following insertion of a piercing

Clinical Suspicion?

Treatment?
What if it does not work?
Minocycline, Ciprofloxacin, rifampin, azithromycin,... etc
Surgery may be needed
Scenario 2:

37 yo Healthy Female

4 week history of this asymptomatic draining lesion of the umbilicus

Clinical Suspicion?

Next Step? Treatment?
Scenario 3: *****important Scenario

37 yo Healthy Female

6 months history of an enlarging somewhat tender lesion of the umbilicus

Admits to 3 months of bloody diarrhea, decreased appetite, and some possible weight loss.

Clinical Suspicion?
Sister Mary Joseph’s nodule

Sister Mary Joseph's nodule is associated with a large number of primary gastrointestinal and genitourinary cancers, including gastric, colorectal, ovarian and pancreatic adenocarcinomas. An umbilical metastasis is generally accompanied by metastases elsewhere in the abdomino-pelvic cavity, thereby portending a grim prognosis.
24 yo Healthy Male: about to be deployed

4 week history of rash on left lower cheek and neck

Tender, Warm to the touch

Looked like “ringworm” so:
PCP treated him with Lotrisone for 2 weeks
Rash got worse, Pimples started forming
PCP then put him on a course of Cephalexin with no significant improvement
2 Nodules formed that previously drained pus

Bacterial cultures: normal flora
1) VASCULAR
2) INFECTIOUS
3) TRAUMATIC
4) AUTOIMMUNE
5) METABOLIC
6) IDIOPATHIC/IATROGENIC
7) NEOPLASTIC
8) CONGENITAL
*T. mentagrophytes* var. *mentagrophytes* is a zoophilic dermatophyte, transmitted to humans by contact with cats, dogs, cattle, rodents, pigs, horses, and monkeys. In this case, transmission likely occurred via contact with an infected kitten. In addition, while our patient is a young, healthy male, his ability to mount an immune response to the invading dermatophyte may have been hindered by his use of high potency topical steroids to the affected area.

Pathology Infectious stains are often negative: High percentage of False Negatives.
66 yo Male

Widespread facial and truncal rash

Started anticonvulsant 3 weeks ago

Fever: 102

Skin feels swollen

No mucosal lesions

Nikolsky Sign Negative
Drug rash?

Hypersensitivity Reaction?

Erythema Multiforme Minor?
Next Steps?

Biopsy

Blood Tests: CBC, CMP, Chest Xray, Echocardio

Treatment:

Discontinue suspected agent: Minocycline, Sulfa, Allopurinol, Anticonvulsant

Prednisone course
Anything Else?

Yes! Most importantly:

10% mortality rate

Causes: delayed Liver Failure, Heart Failure

Morbidity: delayed thyroid dysfunction, delayed hepatitis, delayed organ failure.
<table>
<thead>
<tr>
<th></th>
<th>DRESS</th>
<th>SJS/TEN</th>
<th>AGEP</th>
<th>Erythroderma</th>
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<tbody>
<tr>
<td>Onset of eruption</td>
<td>2-6 weeks</td>
<td>1-3 weeks</td>
<td>48 hours</td>
<td>1-3 weeks</td>
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<td>Duration of eruption</td>
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<td>1-3</td>
<td>&lt;1</td>
<td>Several</td>
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<td>Fever</td>
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<tr>
<td>Mucocutaneous features</td>
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<tr>
<td>Facial edema, morbilliform eruption, pustules, exfoliative dermatitis, tense bullae, and possible target lesions</td>
<td>+++</td>
<td>+++</td>
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<td>Histological pattern of skin</td>
<td>Perivascular lymphocytic infiltrate</td>
<td>Epidermal necrosis</td>
<td>Subcorneal pustules</td>
<td>Erythematous plaques and edema affecting &gt;90% of the total skin surface with or without diffuse exfoliation</td>
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<td>Lymph node enlargement</td>
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<td>Lymph node histology</td>
<td>Lymphoid hyperplasia</td>
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<td>No, unless reflecting Sézary syndrome or other lymphoma</td>
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<td>Hepatitis</td>
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<td>Other organ involvement</td>
<td>Interstitial nephritis, pneumonitis, myocarditis, and thyroiditis</td>
<td>Tubular nephritis and tracheobronchial necrosis</td>
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<td>Neutrophils</td>
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<td>Atypical lymphocytes</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Mortality (%)</td>
<td>10</td>
<td>5-35</td>
<td>5</td>
<td>5-15</td>
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*AGEP, Acute generalized exanthematous pustulosis; DRESS, drug reaction with eosinophilia and systemic symptoms; SJS, Stevens–Johnson syndrome; TEN, toxic epidermal necrolysis.*
49 yo otherwise healthy Male

3 months history of EXTREMELY itchy rash of buttocks, arms and knees bilaterally

Tiny “pimples” that are unbearably itchy

No topicals
Clinical Suspicion?
Testing?
Where to BIOPSY?

DIF biopsy:

BIOPSY: normal appearing skin 3 mm from a blister Multiple biopsies may be required

AVOID: active lesions
Specific autoantibody tests for DH are:

- IgA anti-endomysial antibodies
- IgA tissue transglutaminase antibody, tTG
- *IgA epidermal transglutaminase antibodies, eTG (when available)
- IgA and IgG deamidated gliadin peptide antibody, dGP
- IgA and IgG gliadin assay
- Total IgA level
Patients with abnormal blood results usually proceed to have small intestinal biopsy to confirm gluten-sensitive enteropathy.

**Gluten-free diet**

Gluten-free diet for life is strongly recommended in patients with DH, as it:

- Reduces the requirement for medication to control DH
- Improves associated gluten-sensitive enteropathy
- Enhances nutrition and bone density
- May reduce the risk of developing other autoimmune conditions
- May reduce the risk of intestinal lymphoma
70 yo Female

1 month history of rash on arms, hands, neck. Occasional face involvement.

Itchy, tender at times.

Gets worse in the sun.

No muscle weakness

20 pound weight loss in the past year.
Dermatomyositis Sine Myositis

- Blood test to detect autoantibodies: non-specific antinuclear antibody (ANA) is found in most patients, specific Anti-Mi-2 is found in one quarter and Anti-Jo-1 in a few, usually those who have lung disease.
- Skin biopsy of the rash: the microscopic appearance is similar to lupus erythematosus

In those over 60, full body examination and testing are recommended, looking for underlying cancer.

Full malignancy workup YEARLY: CT chest abdomen pelvis

CBC, CMP, Colonoscopy, Mammogram, CA125 (ovarian), CA19-9 (pancreatic)
DIRECT IMMUNOFUORESCENCE (DIF)

For SLE and the Lupus Band Test (LBT):

DO TWO BIOPSIES FOR DIF:

1. BIOPSY: erythematous or active border of an established lesion (“involved”)

2. BIOPSY: sun-protected, nonlesional, buttock or inner thigh AVOID: old lesions, ulcerated skin, and facial lesions SPECIFY: “uninvolved” or “nonlesional”

For DLE, SCLE and DM:

• BIOPSY: erythematous border of an established (>3 months) lesion

• AVOID: old lesions • SPECIFY: “involved” or “lesional”
### BULLOUS DISORDERS AND VASCULITIS

**Biopsy Sites for Direct Immunofluorescence**

#### Pemphigus or pemphigoid, Skin Lesions:
- Edge of lesion (as shown)
- 2nd biopsy, 3 mm. from lesion (perilesional)

#### Pemphigus or pemphigoid, Mouth Lesions, perilesional area:
- 2nd biopsy, edge of lesion

#### Dermatitis herpetiformis, Normal Skin, perilesional area:

#### Porphyria and drug-induced pseudoporphyria, Skin Lesions of hands or face:

#### Henoch Schonlein purpura and vasculitis, Lesional Skin, Fresh*:
- (<24 hours optimal; <48 hours acceptable)

#### Stasis dermatitis or livedo vasculitis, Skin Lesions:

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**Serum Studies (Auto Anti)**

- Pemphigus
- All Cases
  - Pemphigoid
  - For DIF Negative Cases

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**Contact Information**

P.O. BOX 26 • BUFFALO, NEW YORK 14215
716-838-0549 • FAX 716-838-0798
FOR DIF KITS CALL 1-800-288-0549
www.beutnerlabs.com

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Scenario:

14 months old Baby Girl presents to this world to torment its parents, deprive them of sleep, scream and cry incessantly...

And then... the SMILE that makes it all WORTHWHILE :)

Clinical Diagnosis: My Daughter Sophie!
Thanks for your Attention!