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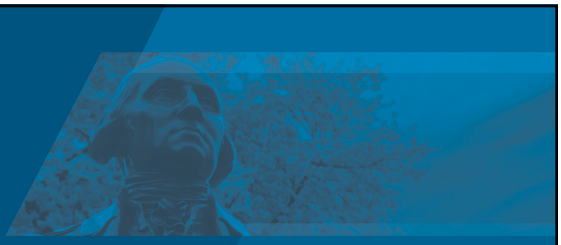

Challenging cases in atopic dermatitis

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Case 1

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- 70+ y/o man with 4 month history of recurrent generalized eczematous rash (sometimes flexural).
- Previously diagnosed with atopic dermatitis
- History of childhood atopic dermatitis
- At the time of initial presentation, he had 10/10 itch.
- Failed multiple topical steroids and tacrolimus ointment
- Only seems to respond to prednisone.
- On physical exam, he presents with ill-demarcated erythematous/pink confluent patches and plaques with barely perceptible edema/papulation

- I had a high-degree of suspicion for allergic contact dermatitis.

- Goal was to perform epicutaneous patch-test
  - Needed to discontinue prednisone for at least 3-4 weeks
  - Needed to control with aggressive TCS and discontinue for at least 1 week

- After 3 weeks, the lesions on the body cleared.
- But, he developed tense bullae on the palms and soles

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- No family history of itchy rash and no risk factors for scabies
- Skin scraping with KOH was done to rule out tinea.
- Two 3mm punch biopsies were performed (H&E and DIF)
- Histopathology was consistent with an eczematous / spongiotic process

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- He finally cleared on another prednisone taper
- Triamcinolone 0.1% ointment soak and smears kept him clear enough to allow for patch testing

- Patch testing revealed 2+ reaction to diphenylguanidine and nickel sulfate.
- Patient had history of dermatitis on penis after exposure to rubber condoms
- Initially, I was uncertain about the relevance of the nickel reactions.
  - Discussed the rare possibility of systemic contact dermatitis and provided handout for dietary sources.

- He returned for follow-up 3 months later.
- Based on the nickel-free diet handout, he suspected that his black tea was a potential culprit.
- He cleared completely upon discontinuation, and flared upon re-challenge.
- He discontinued for good and remained clear ever since.
- ***Moral of the story:*** Not all that is flexural is AD. Keep a broad differential.

Case 2

- 50+ y/o man with lifelong moderate-severe atopic dermatitis
- Was placed on dupilumab approximately 12 months ago by another dermatologist
- Lesions cleared 99% from the neck down
- However, facial dermatitis appears to have worsened since starting dupilumab

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- I initially treated with triamcinolone 0.1% ointment…it failed.
- Then, I went to clobetasol ointment soak and smear under occlusion for 2 weeks and nada.
- A 3 mm punch biopsy was performed and revealed:
  - Spongiotic derm with eos and mild decreased CD7 expression on lymphocytes.
  - Tissue TCR rearrangement was negative
  - Overall, felt not to be CTCL.

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- Patch testing revealed:
  - Sorbitane Sesquioleate, 20% pet - 1+ reaction
    - Ingredient present in her foundation and blush

Facial erythema while on dupilumab

- A systematic review identified 101 patients from 16 studies with reported dupilumab-associated facial or neck erythema.
- 52% had baseline AD face or neck involvement.
- 11% discontinued dupilumab owing to this adverse-event.
- Etiologies of facial erythema were reported as:
  - Rosacea
  - Allergic contact dermatitis
  - Head and neck dermatitis.

Jo CE, Finstad A, Georgakopoulos JR, Piguet V, Yeung J, Drucker AM. Facial and neck erythema associated with dupilumab treatment: A systematic review. *J Am Acad Dermatol*. 2021 May;84(5):1339-1347.

Facial erythema while on dupilumab

- Facial erythema was not reported as an adverse-event in the dupilumab clinical trials.
- We currently do not know the prevalence or incidence of face and neck erythema in patients treated with dupilumab.

Patch testing while on dupilumab

- Case series (n=7 adults; 3 females, ages 24-68 years).
- Long-standing AD with generalized, refractory dermatitis.
- Treated with dupilumab 600 mg followed by 300mg SC Q2W.
- All experienced almost clear skin by 4-16 week, but had persistent localized dermatitis that was refractory to dupilumab and concomitant mid- to super-potent topical corticosteroids.
- Recalcitrant lesions were localized to the hands/digits (n=3), face/neck (n=5), or feet (n=1).

Stout M, **Silverberg JI**. Variable impact of dupilumab on patch testing results and allergic contact dermatitis in adults with atopic dermatitis. *J Amer Acad Dermatol*. 2019 Jul;81(1):157-162.

Patch testing while on dupilumab

- In all seven cases, at least one positive patch test reaction was observed, with a total of 25 different allergens having a 1+ or stronger reaction.
- Allergen sources were:
  - Personal care products (n=5)
  - Boots (n=1)
  - Occupational exposure (n=1).
- In one case, repeat patch testing had false negatives to MCI/MI and multiple fragrances.

Stout M, **Silverberg JI**. Variable impact of dupilumab on patch testing results and allergic contact dermatitis in adults with atopic dermatitis. *J Amer Acad Dermatol*. 2019 Jul;81(1):157-162.

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How to assess facial erythema while on dupilumab

- Good history and review of systems
  - Baseline history of ocular disease or facial lesions
  - Temporal relationship with dupilumab
  - Episodic or chronic
  - Secondary to withdrawal of TCS, OCS or CsA
- Careful examination
  - Morphology - Acneiform, eczematous, psoriasiform
- Supportive testing
  - Patch testing to rule out allergic or airborne contact dermatitis
  - Prick testing to rule out environmental or protein allergens
  - Biopsies/histopathology have not been particularly useful, but may be considered

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How to assess facial erythema while on dupilumab

- Known-allergen avoidance (no evidence to support empiric avoidance)
- Trial of TCS or TCI
- Topical rosacea treatments in cases that look like rosacea
- OCS are almost always effective, but I would not recommend them
- Topical anti-yeasts and anti-fungals don't seem to work in these scenarios
- Oral antifungals or antibiotics seem to work, but unclear exactly why

- Consider tapering dupilumab to every 3 or 4 weeks in patients who are clinically clear/almost clear

Thank you!