Head and Neck Dermatitis in Dupilumab: Could it be Contact Dermatitis?

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Disclosures

Relationship | Manufacturer
---|---
Speaker | Regeneron/Sanofi Genzyme, Pfizer, Eli Lilly, LEO, Galderma, and L’Oreal
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Head and Neck Dermatitis

- A diagnostically challenging entity with a broad differential
- Poses specific treatment issues given sensitivity of facial skin, periocular areas, and difficulties treating the scalp
- Recent reports have highlighted this presentation in patients currently undergoing dupilumab therapy
- Further complicates diagnosis and management


Head and Neck Presentation/Nomenclature

- “Head and Neck” vs. “Face and Neck”?
- Since there is often scalp involvement, Head and Neck is probably a more apt description


Head and Neck Presentation

- The forehead, eyelids, and neck are almost invariably affected
- Majority of patients (80%+) report manifestations of AD in typical body areas as children → flaring in the head and neck region around puberty or young adulthood
- This suggests that increased sebum production plays a role → Malassezia yeasts suspected


Head and Neck Presentation

- Numerous studies have examined Malassezia colonization in AD... results have been somewhat mixed
- However, there are many limitations including:
  - Malassezia has fastidious culture requirements
  - Many studies use qualitative instead of quantitative methods
  - Studies use different sampling methods
  - Studies use different culture media and methods
  - All of these have further complicated the story

Malassezia Allergy?

- There is a complex literature on immune responses of AD patients to Malassezia.
- Again, this has many limitations and is overall somewhat unconvincing on a population scale.
- Suffice it to say: some research has shown that patients with AD react more frequently to Malassezia antigen challenge than health controls, suggesting there is a signal of some sort.


Treatment of Malassezia Type

“There is significant literature to suggest that these patients will benefit markedly from a 1- to 2-month course of daily itraconazole or ketoconazole followed by chronic treatment with twice-weekly itraconazole or ketoconazole. In cases in which oral therapy is contraindicated or not warranted, twice-daily therapy with topical ciclopiroxolamine cream may be useful.”


...Enter Dupilumab

- In March 2017, dupilumab was approved for moderate-to-severe uncontrolled AD.
- Notably, it has been shown to treat AD effectively everywhere on the body, including the head and neck area.


Dupilumab

- Not long after, however, reports of new onset or worsening face and neck dermatitis began to appear:
  - 26-year-old female patient developed fine, scaling, edematous, pink to red plaques on the face and anterolateral neck after 6 months on dupilumab treatment.
  - No other dupilumab-associated adverse effects (e.g., conjunctivitis)
  - Very treatment refractory


Figure: Dalia Y, Johnson SM. Case report: first reported case of facial rash after dupilumab therapy. Pract Dermatol 2018;25–26.

DAFND

- Additional reports of dupilumab-associated face and neck dermatitis (DAFND) have surfaced since this initial report.
- Seems different than Head and Neck Dermatitis, with less scalp involvement.
- Nomenclature: “New regional dermatosis”, “Dupilumab facial redness”.
  - Distinct in that it starts after initiation of dupilumab therapy and is refractory to treatment: drug-associated face and neck dermatitis (DAFND)*
  - Note: As of yet, it has not been reported with agents in development, thus the “D” may end up standing for “dupilumab”.


Differential

- 6 alternate diagnostic considerations outside of DAFND.
  - We will briefly review them all, along with some workup and therapeutic considerations.
Black Tea Compress

1. Obtain unflavored black tea
2. Brew one tea bag for 10 min in a cup of boiling water, then discard this tea
3. Add another cup of boiling water to brew a second cup using the same tea bag for 10 min (i.e., the second steeping), and allow this weaker tea to cool to room temperature
4. Place in the refrigerator for at least an hour to ensure that it is nice and cool before proceeding
5. Soak a soft cloth or gauze in the weak tea infusion and wring out gently
6. Apply the damp compress to the affected area(s) for 20 minutes
7. Apply a suitable moisturizer immediately after to prevent dryness

Repeat this 4-5 times per day for six days or until improved
Patch Testing on Dupilumab?

- Dupilumab works via Th2 blockade while ACD is primarily via Th1/T cytotoxic
- Yet, there are reports of patients with ACD who have responded to dupilumab...
- Not all ACD is propagated through the TH1 cellular pathway, but one recent study concludes:
  - "Although a few reactions were not redemonstrated on dupilumab, the majority of reactions were conserved, suggesting that dupilumab does not usually exert a uniformly dampening effect on ACD."

Thank you!

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