

When will the TH1 switch make you switch? A case report of a dupilumab-induced psoriasiform rash over 6 years

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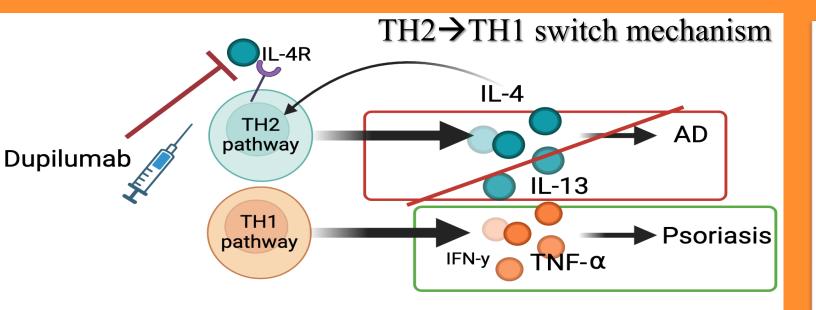
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Background

Dupilumab-associated psoriasis may occur in 1.8-3.3% of patients with atopic dermatitis (AD), invalidating the myth that opposing inflammatory processes prevent AD and psoriasis from coexisting. The blockade of interleukins 4 and 13 by dupilumab may promote a switch from T-helper 2 (Th2)mediated inflammation toward the Th1-mediated inflammation involved in psoriasis. The average latency period from dupilumab initiation to psoriasis development is 5 months.











The Clinical Case:

Here we present a unique case of new-onset psoriasis in a patient with AD and prurigo nodularis (PN) nearly 2 years after beginning dupilumab. Psoriasis flares were tolerated for an additional 4 years without drug interruption.

History of the **Present** Illness

- A 60-year-old woman with no history of psoriasis
- Presented with an extremely itchy, (10/10), full-body rash for one year

Physical Exam

- Multiple pink, lichenified, scaly papules with excoriations and overlying hemorrhagic crust
- Diffusely located on upper and lower extremities and back

Suspected Diagnoses

- Atopic Dermatitis (AD)
- Prurigo Nodularis (PN)

Treatment Timeline

Nov 2017-Initial Presentation

- Failed topical steroids, oral antihistamines, lidocaine, montelukast
- Prescribed cyclosporine 150 mg daily, mirtazapine 15 mg PRN nightly, and mometasone cream 0.05% in silicone

Jan 11, 2018

Cyclosporine

decreased

to 100 mg

• Itch-free

Feb 27, 2018

- Pruritus returned on scalp and extremities
- Cyclosporine decreased to 75 mg
- Dupilumab prescribed

Mar 7, 2018

• DUPILUMAB START (600

Cyclosporine tapered

mg loading dose, 300 mg

every 2 weeks afterwards)

ITCH FREE

Mar 8, 2018

- Developed 3 new, painful, lesions on bilateral shins
- Found to be squamous cell carcinoma, keratoacanthoma
- Started Keflex 500 mg 4x/day for 7 days + Mohs surgery

- Dec 31, 2023 Emergent visit for severe psoriasiform rash (>20%
- body surface area) Dupilumab STOPPED
- Prescribed methotrexate 12.5 mg weekly, with continued mometasone/ silicone cream

Jan 1, 2024

- Rapid improvement of rash
- Remains itch-free
- Prescribed upadacitinib 15 mg daily

Intermittent psoriasis flares, resolved with clobetasol and calcipotriol

Jan 30, 2020

First report of scattered,

guttate-like, red, scaly

plaques on legs

Conclusion

- A personalized therapeutic approach is important when using dupilumab to treat AD or other chronic/dermatologic conditions.
- Dupilumab-induced psoriasis may develop after several years and should always be considered a potential risk in patients who initially tolerate treatment well.
- The benefit of dupilumab in ameliorating symptoms may outweigh the burden of this adverse effect.
- o These considerations should be discussed when starting a patient on dupilumab and throughout the treatment course.

Future Directions

- The development of psoriasis while on dupilumab is not uncommon, however, there is limited data on how long patients can tolerate symptoms
- Additional research is needed to further characterize this relationship

References

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