

Concurrent use of omalizumab and dupilumab in a 47-year-old woman with chronic spontaneous urticaria and atopic dermatitis

Jesper Grønlund Holm MD, PhD , Jennifer Astrup Sørensen MD, Simon Francis Thomsen MD, PhD

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Dear Editor,

We present the first case of concurrent chronic spontaneous urticaria (CSU) and atopic dermatitis (AD) treated successfully with both omalizumab and dupilumab. A 47-year-old woman with a history of multiple allergies and itchy skin since 2003 was ineffectively treated with topical corticosteroids and emollients. By June 2020, she presented to our department with a 4-month history of hives and was treated with high-dose antihistamines (fexofenadine 360 mg twice daily) and prednisolone (25 mg daily).

The patient had a Dermatology Life Quality Index (DLQI) score of 25 out of 30, an Urticaria Activity Score in the past 7 days (UAS7) of 35 out of 42, and an Urticaria Control Test (UCT) score of 2 out of 16 (with low score indicating poor control). Treatment with omalizumab 300 mg every 4 weeks for CSU was initiated, withdrawing prednisolone over 3 weeks. After 4 weeks, the patient experienced no effect from omalizumab, and the treatment interval was reduced to 2 weeks. In addition, prednisolone 25 mg daily and topical corticosteroids were added. After 3 months, the patient experienced good effect from omalizumab 300 mg every 2 weeks without the use of prednisolone. By October 2020, the effect from omalizumab was suboptimal although now increased to 450 mg every 3 weeks, with the patient using prednisolone 12.5 mg daily because of skin pain (Fig. [1a–d](#)). As a result of the ineffective treatment with omalizumab and continuous need for prednisolone, concurrent AD was diagnosed and thus uncontrolled, and why the patient was started on dupilumab 600 mg followed by 300 mg every two weeks, in addition to omalizumab 300 mg every four weeks and fexofenadine 360 mg twice daily. The patient was also allowed use of topical corticosteroids and was given prednisolone 12.5 mg with withdrawal over 10 days to bridge dupilumab with omalizumab injections. At the time dupilumab was added to omalizumab, the patient had a DLQI score of 29, UAS7 of 21, and UCT of 0. AD severity was also assessed,

using validated tools. The patient had a SCORing Atopic Dermatitis (SCORAD) score of 57.7 out of 103, an Eczema Area and Severity Index (EASI) score of 14.8 out of 72, and a Patient Oriented Eczema Measure (POEM) score of 20 out of 28. Work Productivity and Activity Impairment (WPAI) score was 100% absent from work, the patient usually working full time and with very limited impairment of daily activities.

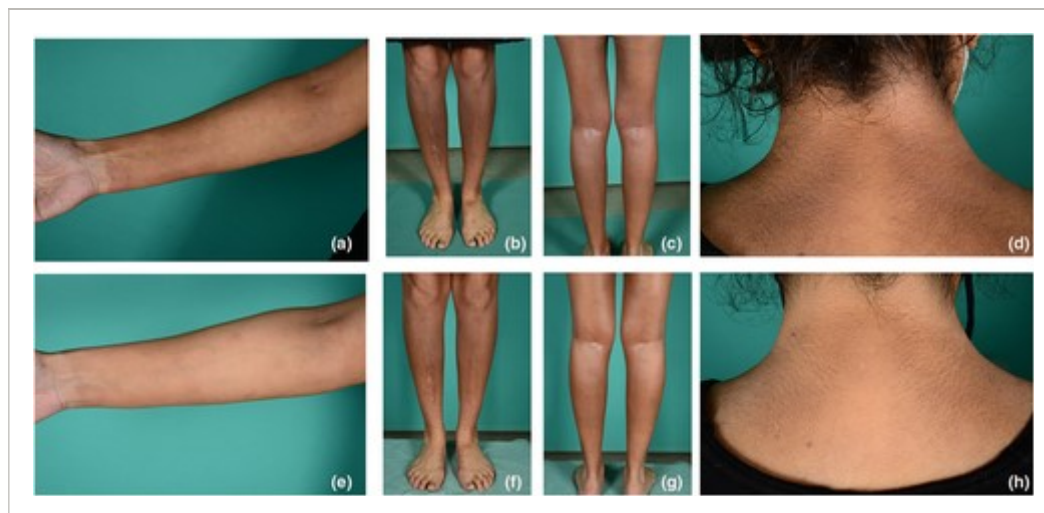


Figure 1

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Clinical photos at baseline (a–d) and 3 months follow-up (e–h) after treatment with both omalizumab and dupilumab

At follow-up after 12 months, she reported marked improvement of both CSU and AD supported by significant improvement in symptom scores with a DLQI score of 3, UAS of 7, UCT of 12, SCORAD of 19.9, EASI of 2.6, and POEM of 6 (Figs. [1e–h](#), [2](#)). The patient had resumed work, full-time, with no absence because of symptoms. Apart from a mild and short itch the day after dupilumab injection, no side effects of treatment were reported. As of June 2021, the patient reported almost immediate onset of itch if antihistamines were not taken, indicating the need for continuous treatment.

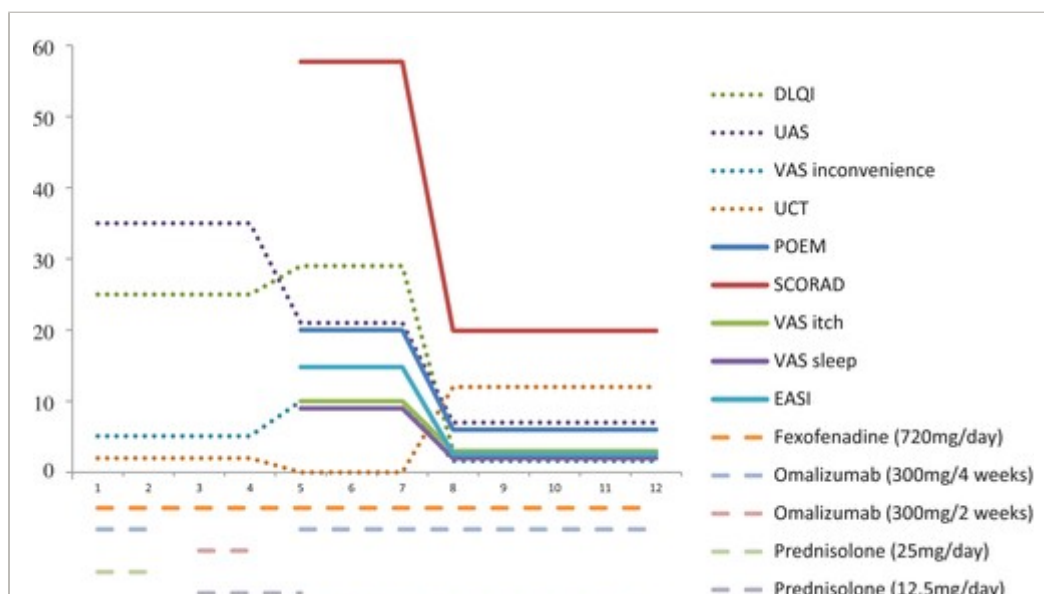




Figure 2

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Timeline of treatments and outcomes. DLQI, Dermatology Life Quality Index; UAS7, Seven days urticaria activity score; UCT, Urticaria control test; VAS, visual analogue scale; SCORAD, Scoring atopic dermatitis; EASI, Eczema area and severity index; POEM, Patient oriented eczema measure. X-axis are months from first visit. Outcome scores on Y-axis are standardized 0–100, with each treatment set as a fix value to portray time of treatment according to the X-axis

A systematic literature search identified a single case report in Germany on the treatment of simultaneous CSU and AD with dupilumab monotherapy, which reported complete remission of both diseases in a 21-year-old female.¹ Adding dupilumab to omalizumab in patients with coexisting CSU and AD appears to be a safe and effective treatment option, although data from more patients on long-term treatment are warranted.

Data availability

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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Reference ▼

1 Föhr J, Herbst M, Jahn S. Treatment of simultaneously occurring urticaria and atopic dermatitis with Dupilumab. *Hautzeit.* 2020; August 27(Online ahead of print).
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