

Dupilumab Associated with Uveitis: A Case Report

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Background:

Atopic dermatitis (AD) is a chronic inflammatory skin disease mediated by T helper 2 (Th2) cytokines interleukins 4 (IL-4) and/or IL-13. Dupilumab is a monoclonal antibody that inhibits signaling of IL-4 and IL-13 via IL4-receptor α blockade. Dupilumab has been shown to provide a statistically significant improvement in AD signs and symptoms and health-related quality of life in patients with moderate to severe AD. Overall, dupilumab has been found to have good long-term safety and efficacy. The most commonly reported adverse events were ophthalmic complications, including dryness, pruritus, blepharitis, conjunctivitis and keratitis. Here, we report a novel case of uveitis in a 57-year-old female after taking dupilumab for moderate-severe AD for over one year.

Case presentation:

A 50-year-old female with a significant medical history for Graves' disease, left eye congenital blindness, inactive discoid lupus with scarring alopecia of the scalp, and vitiligo was diagnosed with adult-onset AD. At age 55, after failing numerous treatment, subcutaneous dupilumab was started with 600 mg loading dose followed by 300 mg every other week. She achieved almost clear skin with a drastic reduction in AD signs, symptoms and quality of life.

At age 57 years (after >1 year on dupilumab) she started experiencing redness and pain in her right eye and was diagnosed with uveitis by ophthalmology and started on corticosteroid eye drops. Given the diagnosis of uveitis and history of vitiligo, an autoimmune workup was pursued. Anti-nuclear antibody (ANA) was elevated at 1:320 with a speckled and homogenous pattern. Otherwise, her labs were within normal limits. Within 2 months, adalimumab was started to treat the uveitis, prednisone was tapered and discontinued, and dupilumab was discontinued.

Over the following months, her uveitis improved, but her AD symptoms worsened, with generalized xerosis, and ill-demarcated erythematous and hyperpigmented plaques on the dorsal hands, digits, wrists, back, forearms and lower extremities, covering approximately 30% of her body surface area. Narrow-band ultraviolet B therapy was started, though she had an inadequate response. Dupilumab was therefore resumed. Within one month of restarting dupilumab, the uveitis recurred. Dupilumab was again discontinued.

Conclusion: This is the first known report of novel uveitis following Dupilumab therapy. Further elucidation of dupilumab's adverse-event profile and the mechanisms of ophthalmic adverse-events, e.g. uveitis, are needed.