

Clinical Utility of Dupilumab for the Treatment of Eosinophilic Esophagitis in Pediatric Patients

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Background:

Eosinophilic esophagitis (EoE) is a chronic inflammatory disease of the esophagus characterized by symptoms of esophageal dysfunction and 15 or more eosinophils per high-powered field (HPF) on esophageal biopsy. Treatment options for EoE include proton pump inhibitors (PPIs), topical corticosteroids (TCS), dietary elimination, and dupilumab. Dupilumab is monoclonal antibody against IL-4 and IL-13 administered subcutaneously and was granted FDA approval for EoE in adults and adolescents recently in 2022. Outcomes of real-world, clinical use of dupilumab for EoE remains unknown.

Objectives:

To observe outcomes in pediatric patients with EoE treated with dupilumab.

Methods:

A retrospective cohort study of pediatric patients prescribed dupilumab for EoE was conducted. Medical records were reviewed for demographic and clinical information as well as endoscopic and histologic findings before and after dupilumab treatment.

Results:

A total of 28 patients were included (mean age 15y, 71.4% male). Mean baseline maximum eosinophils/HPF was 48 ± 41 . 75% of patients were treated with combination therapy of EoE with diet elimination, PPIs, or TCS prior to being prescribed dupilumab. Prior authorization for dupilumab was required in 85.7% of cases. Ten patients had follow-up endoscopy with biopsy after starting dupilumab, and among these patients the mean maximum eosinophils/HPF with dupilumab significantly improved from 44 ± 37 to 13 ± 15 ($p=0.027$). Among 12 patients who had follow up clinic visits, two patients reported pain or swelling at injection sites, but no other adverse events were reported.

Conclusions:

Dupilumab significantly improves histologic findings of EoE and is well tolerated among pediatric patients. We hope for continued monitoring of these patients to understand the clinical utility of dupilumab for EoE over time.