

Do Topical Corticosteroids Induce Histologic Remission and Improve Clinical Symptoms in Eosinophilic Esophagitis? - A Systematic Review and Meta-Analysis

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Published: 05 May 2023

Introduction: Eosinophilic esophagitis is a chronic esophageal disease characterized histologically by eosinophil-predominant inflammation and clinically by symptoms related to esophageal dysfunction. The management of the disease commonly involves elimination diet, acid suppression, topical corticosteroids, and esophageal dilation.

Methods: We conducted a systematic review and meta-analysis of studies that investigated the efficacy and safety of topical corticosteroids compared with placebo in eosinophilic esophagitis. We performed a comprehensive search in the databases of PubMed/MEDLINE, Embase, and Cochrane from inception through October 18, 2021. Our outcomes were histologic remission, symptomatic clinical improvement, and the occurrence of oral or esophageal candidiasis. The random-effects model was used. A p value <0.05 was considered statistically significant. Heterogeneity was assessed using the Higgins I² index.

Results: Nine randomized controlled trials involving 483 patients were included in the meta-analysis. Compared to placebo, patients who received steroids were more likely to achieve histologic remission (RR 12.50, 95% CI 6.04 – 25.88, p < 0.00001, I² = 0%) and report symptomatic clinical improvement (RR 1.84, 95% CI 1.02 – 3.32, p = 0.04, I² = 64%). Oral or esophageal candidiasis was more likely to occur in patients who received steroids (RR 4.31, 95% CI 1.53 – 12.18, p = 0.006, I² = 0%).

Conclusion: Our meta-analysis demonstrated that topical corticosteroids were more effective than placebo in achieving histologic remission and improving clinical symptoms. However, they are more likely to cause oral or esophageal candidiasis.