compared with healthy controls. While baseline spirometry was normal, EoE subjects had lower PC_{20} values (indicating greater airway reactivity) and higher eNO (indicating increased lower airway atopic inflammation) in comparison with healthy subjects. Frequency of AHR was significantly greater in EoE (OR = 4.13; 95% CI: 1.16–14.62; $P = .0281$) and EoE without asthma (OR = 6.60; 95% CI: 1.64–26.58; $P = .0079$). In particular, AHR was present in 8 of 18 EoE subjects without a prior asthma diagnosis. When history of wheezing was included, 66.7% of EoE subjects were considered to have a definite or likely diagnosis of asthma. An elevated total serum IgE was associated with a greater risk of AHR (OR = 99.643; 95% CI: 1.633–56.925; $P = .0124$), but eNO and allergen sensitization were not. There were no differences in median serum levels of IL-5, IL-9, eotaxin, EGF, and FGF-2 among EoE subjects with and without AHR and healthy controls.

CONCLUSIONS. There is a high frequency of AHR and likely asthma diagnosis in EoE subjects. Elevated total serum IgE was the only marker associated with a greater risk of AHR in EoE children.

REVIEWER COMMENTS. As previously reported, EoE subjects had a very high prevalence of associated atopic disorders, and this study suggests that EoE patients in particular are being underdiagnosed for asthma. The cross-sectional design did not account for possible AHR variation over time and possible association with changes in EoE disease activity and lacks a comparison with children with atopic disease without EoE. Longitudinal studies correlating AHR with the treatment of EoE and associated atopic disease would help to determine its significance in EoE.

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Retrospective Comparison of Fluticasone Propionate and Oral Viscous Budesonide in Children With Eosinophilic Esophagitis

Fable JM, Fernandez M, Goodine S, Lerer T, Sayej WN. [published online ahead of print May 9, 2017]. *J Pediatr Gastroenterol Nutr*. doi: 10.1097/MPG.0000000000001626

PURPOSE OF THE STUDY. Oral topical steroid therapies with oral viscous budesonide or fluticasone propionate are effective treatment options for eosinophilic esophagitis (EoE) patients, but a comparison between the 2 treatments has not been performed in pediatric patients. This study was designed to compare these 2 treatments.

STUDY POPULATION. A total of 68 EoE patients from Connecticut Children's Medical Center seen from 2010 to 2015.

METHODS. A retrospective chart review of patients all treated with either swallowed fluticasone propionate or oral viscous budesonide (thickened with either Neocate Duocal or sucralose) for >8 weeks who underwent endoscopy pre- and posttreatment.

RESULTS. Two-thirds cohort responded to topical steroids (65%), with fewer responding to fluticasone (FP) than oral viscous budesonide (OVB) (40% vs 75%, $P < .006$). Lower posttreatment eosinophils per high-power field (eos/HPF) levels were noted in the OVB treated patients (12±16 eos/HPF) compared with the FP treated group (20±29 eos/HPF). There was also a significantly greater difference in the change of absolute eos/HPF from pre- to posttreatment in the OVB group versus FP (−33 vs −18, $P = .047$). Asthma was associated with a poorer response in OVB treated patients. The vehicle thickener did not affect outcomes.

CONCLUSIONS. The data suggest that treatment with oral viscous budesonide leads to better endoscopic and histologic outcomes than fluticasone. Adherence to treatment and history of asthma are major determining factors in the response to treatments. Using Neocate Duocal as the budesonide delivery vehicle is just as effective as sucralose.

REVIEWER COMMENTS. This is the first study to directly compare the efficacy of topical steroid therapies in EoE. The limitations of this study include the retrospective nature and the potential selection bias, as the patients included in the study were treated based on provider preference, a past history of treatment success or failure, patient preference, insurance issues, or other reasons that could impact the measured response rates. In addition, the compliance with treatment was not assessed.

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ATOPIC DERMATITIS, CONTACT DERMATITIS, AND ANGIOEDEMA

Antimicrobials From Human Skin Commensal Bacteria Protect Against *Staphylococcus aureus* and Are Deficient in Atopic Dermatitis

Nakatsuji T, Chen TH, Narala S, et al. *Sci Transl Med*. 2017; 9(378):eaah4680

PURPOSE OF THE STUDY. To identify if the normal human skin microbiome contains commensal bacteria that produce antimicrobial activity against *S. aureus* and if commensal loss results in the development of atopic dermatitis (AD).

STUDY POPULATION. The study included adults with AD and age-matched, healthy, non-AD subjects. A large number of AD subjects were culture positive for *S. aureus* on lesional and nonlesional skin sites.

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Carla M. Davis

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