

Eosinophilic Esophagitis Epidemiology

Noel RJ, Putnam PE, Rothenberg ME. **Eosinophilic esophagitis**. *N Engl J Med.*, 2004;**351**, 940-941.) Noel, Putnam and Rothenberg describe the prevalence of eosinophilic esophagitis is increasing in the US has been extended to studies in Europe and Australia.

Cherian, S., Smith, N. M., & Forbes, D. A. *Archives of Disease in Childhood*. **Rapidly increasing prevalence of eosinophilic esophagitis in Western Australia**. 2006; **91**, 1000-1004. The authors examined records over a 10-year period in Western Australia, and found the prevalence rates increased from 0.5 per 100,000 to 8.9 per 100,000.

Straumann, A. & Simon, H. U. **Eosinophilic esophagitis: Escalating epidemiology?** *Journal of Allergy and Clinical Immunology*, 2005; **115**, 418-419.

The authors examined records over a 16-year period in Olten County, Switzerland, and found the prevalence rates increased from 2 per 100,000 to 23 per 100,000 people.

Reviews

The numbers of review articles has increased over the past 12 months, reflecting the growing awareness among experts that professionals from several disciplines need to be made aware of eosinophilic disorders. Excellent recent examples include:

Furuta, G. T. **Emerging questions regarding the eosinophil's role in the esophago-gastrointestinal tract**. *Current Opinion in Gastroenterology*, 2006; **22**, 658-663.

Furuta, G. T. & Straumann, A. Review article: **The pathogenesis and management of eosinophilic esophagitis**. *Alimentary Pharmacology & Therapeutics*, 2006; **24**, 173-182.

Liacouras, C. A. **Eosinophilic esophagitis: Treatment in 2005**. *Current Opinion in Gastroenterology*, 2006; **22**, 147-152.

Noel, R. J. & Rothenberg, M. E. **Eosinophilic esophagitis** *Current Opinion in Pediatrics*, 2005; **17**, 690-694.

Noel, R. J. & Tipnis, N. A. **Eosinophilic esophagitis: A mimic of GERD**. *International Journal of Pediatric Otorhinolaryngology*, 2006; **70**, 1147-1153.

Treatment studies

Several controlled studies are currently being conducted to examine different treatments: steroids, elemental formula, and IL-5 inhibitors.

Kelly K, Lazenby AJ, Rowe PC, Yardley JH, Perman JA, Sampson HA. **Eosinophilic Esophagitis Attributed to Gastroesophageal Reflux: Improvement with an Amino Acid-Based Formula**. *Gastroenterology*, 1995; **109**, 1503-1512.

This seminal study reported that gastrointestinal reflux systems associated with eosinophilic infiltration were food related and that symptoms improved when the 10 pediatric patients were put on elemental diets.

Konikoff, M. R., Noel, R. J., Blanchard, C., Kirby, C., Jameson, S. C., Buckmeier, B. K., Akers, R., Cohen, M. B., Collins, M. H., Assa'ad, A. H., Aceves, S. S., Putnam, P. E., & Rothenberg, M. E. **A randomized, double-blind, placebo-controlled trial of fluticasone propionate for pediatric eosinophilic esophagitis** *Gastroenterology*, 2006; **131**, 1381-1391.

Reading List

Thirty-six pediatric EE patients were randomly allocated to receive either fluticasone propionate or a placebo for a period of 3 months. The results showed decreased levels of eosinophils in the esophagus for those given FP. The effects were strongest for younger patients and those without allergies.

Liacouras, C.A., Spergel, J. M., Ruchelli, E., Verma, R., Mascarenhas, M., Semeao, E., Flick, J., Kelly, J., Brown-Whitehorn, T., Mamula, P. & Markowitz, J. E. **Eosinophilic esophagitis: A 10-year experience in 381 children.** *Clinical Gastroenterology and Hepatology*, 2005; **3**, 119801206.

A review of the EE cases the authors examined at their Philadelphia hospital. They find corticosteroids and elemental diets lower the levels of eosinophils and symptoms while taking them.

Remedios, M., Campbell, C., Jones, D. M., & Kerlin, P. **Eosinophilic esophagitis in adults: clinical, endoscopic, Histologic findings, and response to treatment with fluticasone propionate.** *Gastrointestinal Endoscopy*, 2006; **63**, 3-12.

Nineteen adult EE patients were administered fluticasone propionate (FP) for 4 weeks. All should decreased eosinophil counts and symptom improvement. The paper also provides details of the endoscopic features of EE and 26 patients, and is a good review of these procedures.

Simon, D., Braathen, L. R., Simon H-U. **Anti-Interleukin-5 antibody therapy in eosinophilic diseases.** *Pathobiology*, 2005; **72**, 287-292.

Anti-IL-5 treatment appears promising for the treatment of Hypereosinophilic Syndrome (HES) and EE, but the authors note how it is too early for any firm conclusions. For example, their EE conclusions, "a promising approach", is based on a single case. Further studies are currently ongoing, and the authors eagerly await the findings.

Spergel, J. M., Andrews, T., Brown-Whitehorn, T. F., Beausoleil, J. L., Liacouras, C. A. **Treatment of eosinophilic esophagitis with specific food elimination diet directed by a combination of skin prick and patch tests.** *Annals of Allergy, Asthma, & Immunology*, 2005; **95**, 336-343.

The authors examined how well an elemental diet helped 146 EE patients. About 3/4 responded well to elimination diet based on skin prick/patch test finding, but a sizeable minority showed little or no improvement.

Stein, M. L., Collins, M. H., Villanueva, J. M., Kushner, J. P., Putnam, P. E., Buckmeier, B. K., Filipovich, A. H., Assa'ad, A. H. & Rothenberg, M. E. **Anti-IL-5 (mepolizumab) therapy for eosinophilic esophagitis.** *Journal of Allergy and Clinical Immunology*, 2006; **118**, 1312-1319.

The authors gave anti-IL-5 therapy to 4 adult EE patients over a 3 month period, and they found the levels of eosinophils in blood and in the esophagus dropped by between 6- and 9-fold one month after treatment.

Eosinophilic Esophagitis in Adults

Gonsalves, N., Policarpio-Nicolas, M., Zhang, Q., Rao, M.S., & Hirano, I. **Histopathologic variability and endoscopic correlates in adults with eosinophilic esophagitis**

Gastrointestinal Endoscopy, 2006; **64**, 313-319. Charts of endoscopy records of 77 adult patients with EE were reviewed. The results revealed much variability across patients indicating the need for multiple biopsies during endoscopy.

Straumann A, Spichtin HP, Grize L, Bucher KA, Beglinger C, Simon HU. **Natural history of primary eosinophilic esophagitis: a follow-up of 30 adult patients for up to 11.5 years.** *Gastroenterology*, 2003; **12**, 1660-1690. (2003).

Reading List

The authors found EE in adults in chronic and leads to dysphagia (i.e. choking) structural esophageal alterations (though no malignant changes were found).

Hypereosinophilic Syndromes

Fletcher, S., & Bain, B. **Diagnosis and treatment of hypereosinophilic syndromes.** *Current Opinion in Hematology*, 2007; **14**, 37-42.

This article reviews advances in current knowledge about causes, diagnosis, and management of HES.