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EOSINOPHILIC ESOPHAGITIS : A CASE REPORT

KEY WORDS: Eosinophilic esophagitis, Esophagitis, Dysphagia

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ABSTRACT

BACKGROUND: Eosinophilic esophagitis is a chronic immune-mediated condition whereby infiltration of eosinophils into the esophageal mucosa leads to symptoms of esophageal dysfunction. Dysphagia and food impaction are the most common presentation.

CASE PRESENTATION: A 54 year old female with history of food impaction and dysphagia, non compliant with treatment. After detail history and informed consent all relevant investigation were done to diagnose the case then conservative management was done.

CONCLUSION: Although the case of GERD and EoE is very similar but EoE patients remain unresponsive to PPI treatment. In all patients after making diagnosis spontaneous esophageal perforation should also ruled out.

INTRODUCTION-

Eosinophilic esophagitis is a disorder characterized by isolated eosinophilic infiltration in esophageal mucosa. The symptoms are very similar to GERD and commonly observed in childrens but recently its prevalence increases in adults also.[1] The first case was reported in 2002.[2] The etiology of eosinophilic esophagitis is not well understood. However, most patients with eosinophilic esophagitis have allergic disorders such as food allergy, atopic dermatitis, asthma or allergic rhinitis[2], and improve by corticosteroid treatment.[3] so it is predicted that eosinophilic esophagitis is highly related to allergy. Though the withholding treatments based on amino acid based formula and 6 most common allergen elimination diet after allergic evaluation, clinical and histological improvement was made in 50% to 90% of patients, which resulting food allergens are primary cause of EoE.[4-6] However, the causative foods were not identified or hard to find. Elimination diets in adults with eosinophilic esophagitis Components of a 6-food elimination diet:

- Wheat
- Dairy
- Eggs
- Soy
- Peanut and tree nuts
- Fish and shellfish

We experienced a case of eosinophilic esophagitis with hypersensitivity which was identified by proper clinical history and improved by steroids and by withholding target food.

CASE REPORT-

A 54 year old female visited ENT and endoscopy clinic because of dysphagia, nausea, and substernal discomfort for 15 days. She did not have any past allergic and family histories of an atopic disease. Physical examination was unremarkable, and any skin lesions were not found. The laboratory testing showed raised eosinophils counts. It is significant as allergen when the class value of total IgE are 2 or above.

Esophagogastroduodenoscopy showed some linear furrows and multiple mucosal nodularities on the lower and mid esophagus without reflux esophagitis. We took 3 specimens at the lower and mid esophagus, respectively, under suspecting eosinophilic esophagitis. Heavy eosinophil infiltration was observed on the esophageal mucosa. Based on the clinical, endoscopic and histological findings, the patient was diagnosed as eosinophilic esophagitis. We first started treatment with proton pump inhibitors after endoscopic examination, but the symptoms were improved partially after 2 weeks. After we confirmed the result of biopsies, withholding treatment was added. The patient symptoms were improved gradually since the withholding treatment. Two months later, follow-up endoscopy revealed a disappearance of linear furrows and mucosal irregularities, and mucosal biopsies showed marked decrease in eosinophil counts less then 5 per high power field. The patient was stable without recurrence at the 1 year follow-up.

Pathology: final pathologic diagnosis:

A. ESOPHAGUS BIOPSY, DISTAL:
Active esophagitis with peak intraepithelial eosinophil count exceeding 40 per HPF.
Basal cell hyperplasia.
Superficial layering of eosinophils is present.
Lamina propria fibrosis.

B. ESOPHAGUS BIOPSY, MID:
Active esophagitis with peak intraepithelial eosinophil count exceeding 40 per HPF.
Basal cell hyperplasia.
Superficial layering of eosinophils is present.
Lamina propria fibrosis.

DISCUSSION -

Eosinophilic esophagitis is characterized by:

1. Esophageal symptoms such as dysphagia, food impaction and substernal discomfort.
2. Eosinophilic infiltration at esophageal mucosa (more then 15 eosinophils per high power field)
3. Unresponsiveness to high dose of proton pump inhibitors.[7]

Initially eosinophilic esophagitis was commonly found in childrens but now its prevalence increases in adults also. Although the pathogenesis not completely understood, it has been thought to relate to allergic disorders, especially food hypersensitivities.[2] Food hypersensitivity reactions are divided into IgE-mediated, non-IgE-mediated and mixed ones. Whereas IgE-mediated reactions are usually immediate and mainly involve the skin, non-IgE-mediated reactions are delayed or chronic and predominantly manifest in the gastrointestinal tract and skin. IgE-mediated reactions can be confirmed by skin prick test and food specific IgE levels in the serum. Also, atopy patch tests are being used to detect delayed, T-cell-mediated hypersensitivity. Eosinophilic esophagitis is thought to be a mixed-reaction disorder, and the combination of skin prick test and atopy patch test may be more effective to identify the causative foods.[8] Therapies of eosinophilic esophagitis include drug (eg, corticosteroid) and diet treatment.[7] Although the use of systemic or topical steroids improves clinical symptoms effectively, eosinophilic esophagitis recurs in more than 90% of patients after treatment is completed.[9] Diet treatment can be divided into 2

categories: amino acid-based formula and elimination diet. Kelly et al[4] reported the effectiveness of an amino acid-based formula in 10 pediatric eosinophilic esophagitis patients. Spergel et al[6] demonstrated that 26 children with eosinophilic esophagitis improved in both symptoms and esophageal inflammation by dietary elimination of foods. Also, they recommended skin prick and atopy patch tests to identify causative foods.[6] Kagalwalla et al[5] also examined 60 children with eosinophilic esophagitis by a 6-food elimination diet (cow's milk, soy, wheat, egg, peanut and seafood) or an amino acid-based formula. Clinical and histological improvements were observed in 74% and 88%, respectively. In adults, however, the evidence of link between food hypersensitivity and eosinophilic esophagitis was limited. In a recent study, 81% of adults with EoE had ≥ 1 allergens identified by skin prick testing and 50% had ≥ 1 skin tests positive to food allergens.[10] The most common food allergens consisted of peanut, egg white, soybean, milk and tree nuts in their study. In our case, we suspected causative food (consist of cow's milk, egg and wheat) by history taking, confirmed it by skin testing, and achieved clinical, endoscopic and histological improvements after avoiding the food. Therefore, allergic evaluations for identifying food triggers should be recommended to all adults with eosinophilic esophagitis. In conclusion, the link between food hypersensitivity and eosinophilic esophagitis has not been well established and there are controversies about the effectiveness of diet treatment in adult patients with eosinophilic esophagitis. Herein, we experienced a case of eosinophilic esophagitis which was induced by specific food identified through the skin testing, and improved by withholding target food. More studies are needed to demonstrate the effectiveness of diet therapy in adult patients with EoE.

REFERENCES -

1. Sgouros SN, Bergele C, Mantides A. Eosinophilic esophagitis in adults: a systematic review. Eur J Gastroenterol Hepatol 2006;18:211-217.
2. Liacouras CA, Spergel JM, Ruchelli E, et al. Eosinophilic esophagitis: a 10-year experience in 381 children. Clin Gastroenterol Hepatol 2005;3:1198-1206.
3. Noel RJ, Putnam PE, Collins MH, et al. Clinical and immuno pathologic effects of swallowed fluticasone for eosinophilic esophagitis. Clin Gastroenterol Hepatol 2004;2:568-575.
4. Kelly KJ, 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.
5. Kagalwalla AF, Sentongo TA, Ritz S, et al. Effect of six-food elimination diet on clinical and histologic outcomes in eosinophilic esophagitis. Clin Gastroenterol Hepatol 2006;4:1097-1102.
6. Spergel JM, Beausoleil JL, Mascarenhas M, Liacouras CA. The use of skin prick tests and patch tests to identify causative foods in eosinophilic esophagitis. J Allergy Clin Immunol 2002;109:363-368.
7. Furuta GT, Liacouras CA, Collins MH, et al. Eosinophilic esophagitis in children and adults: a systematic review and consensus recommendations for diagnosis and treatment. Gastroenterology 2007;133:1342-1363.
8. Spergel JM, Andrews T, Brown-Whitehorn TF, Beausoleil JL, Liacouras CA. Treatment of eosinophilic esophagitis with specific food elimination diet directed by a combination of skin prick and patch tests. Ann Allergy Asthma Immunol 2005;95:336-343.
9. Helou EF, Simonson J, Arora AS. 3-yr-follow-up of topical corticosteroid treatment for eosinophilic esophagitis in adults. Am J Gastroenterol 2008;103:2194-2199.
10. Penfield JD, Lang DM, Goldblum JR, Lopez R, Falk GW. The role of allergy evaluation in adults with eosinophilic esophagitis. J Clin Gastroenterol 2010;44:22-27.