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Eosinophilic Esophagitis
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Introduction

Providers have only been diagnosing eosinophilic esophagitis (EoE) for two decades. There is still a lot to learn about the diagnosis, treatment, and cause of EoE. I chose this topic to research due to personal interest. The general-public has shown increased awareness in how food is processed, antibiotics used in meats, genetically modified foods, organic foods, and their effects on health. The question that arises from this newly diagnosed process is, is this the body’s response to irritants, or an autoimmune disease?

Sign and Symptoms

The pediatric patient

Food aversion
Abdominal pain
Vomiting
Failure to thrive
Male
Other atopic disease

The adult patient

Dysphagia
GERD not relieved by proton pump inhibitors
Other atopic diseases

Asma
Food impaction

The EGD

The esophago-gastroduodenal endoscopy (EGD) has brought EoE to the forefront. Patients scopes present differently among the ages groups. This leads the researchers to believe that EoE is a chronic progressive disease that causes fibrotic changes to the esophagus over time.

Significance of pathophysiology

- Eosinophilic esophagitis is an autoimmune disease, patients that are diagnosed with EoE usually develop other autoimmune diseases throughout their lives.
- It is commonly accepted theory that the inflammation in the esophagus is due to a Th2 inflammation driven by the cytokine thymic stromal lymphopoietin (TSLP) secreted by epithelial cells in the esophagus (Cianferoni & Spergel, 2016).
- Biopsies are taken to confirm the diagnosis, fifteen biopsies of patients with EoE showed increased significance of the pathophysiology.

Nursing Considerations

- Assess for dysphagia
- Teaching the patient to sit up right, eat slowly, drink plenty of water between bites, and chew food thoroughly.
- Teach patients about their food allergens and how to read labels to be aware of foods that contain allergens.
- Review medications prescribed to the patient and how to take medications to minimize exacerbations.

Process of Pathophysiology

- Eosinophilic esophagitis is an autoimmune disease, patients that are diagnosed with EoE compared those without. Evidence suggests that TSLP is key for the maturation of antigen-presenting cells (APCs) and other hematopoietic cells. TSLP is a master regulator of Th2-type allergic inflammation. Blood samples and esophageal biopsies of patients with EoE showed increased levels of Th2 prototypical cytokines and chemokines such as interleukin (IL)-5, IL-4, IL-13, IL-15, TSLP, and eotaxin-3 secreted by the typical cells involved in allergic inflammation: T cells, mast cells, basophils, iNKTs, and mast cells; enhancing survival and activation of eosinophils, thus responsible for the fibrotic changes (Cianferoni & Spergel, 2016).
- and esophageal epithelial cells. Th2 cytokines are responsible for inflammation appreciated in EoE. Th2 cytokines induce an increased response from T cells, basophils, iNKTs, and mast cells; enhancing survival and activation of eosinophils, thus responsible for the fibrotic changes (Cianferoni & Spergel, 2016).

Treatment

- Food elimination diet
- Oral antihistamine
- Oral glucocorticoid
- Acid reducing drugs

Spergel, J. (2016). The cytokine, TSLP, is a secreted by epithelial cells in the skin, gut, and lung, in response to infectious agents, atopic cytokines, and environmental allergies. The dysregulation of TSLP, and other cytokines, is the cause of the elevated levels of Th2 cytokines in patients with EoE.

References

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