Tiana Boyd

WDD 130: Web Fundamentals

Brother Patten

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**Home Page**

What is EoE

Eosinophilic esophagitis is pronounced: e-o-sin-o-FILL-ik uh-sof-uh-JIE-tis or EoE for short. There is a saying among the EoE community: Hard to say. Even harder to live with. Sometimes, the disease is also referred to as EE; however, that can oftentimes be confused with erosive esophagitis among those within the medical community. To date, there isn’t a known cause of why individuals get EoE. Medical scientists have discovered that many who have EoE also have food and environmental allergies. Recently, scientists have made great strides in identifying several genes that may play a role in EoE, which gives hope in future treatments for EOE. Currently, there is not a cure for EoE.

EoE is a rare disorder of the esophagus. In medical terms, the disease is classified as an “immune-mediated” disease. It’s complicated. In an effort to simplify the disease, an example will be used to illustrate the cause and effects if the disease.

Let’s say “Jeremy” has an EoE response to dairy (milk, ice cream, cheese, etc.). If Jeremy were to eat dairy, and after chewing or swallowing the dairy, the milk proteins smear his esophagus as the food works its way down to the stomach. Jeremy’s body would then detect the dairy and dispatch eosinophils, or a type of disease-fighting white blood cells, to go and remove or destroy the detected dairy. Somewhere and somehow, there are “wires,” so to speak, that are crossed and mixed up within the body to where the eosinophils see dairy as a parasite and attacks its own body in order to destroy these milk proteins. In the process of destroying and detecting the dairy proteins in a patient with EOE, the eosinophils will cause tissue damage and scarring in the esophagus. All this tissue damage will later cause inflammation, narrowing of the esophagus, difficulty swallowing, vomiting, and various other symptoms.

**Statistics**

There are varying statistics floating out in the medical community due to the rarity of the disease; however, for the sake of giving an approximate prevalence of the disease, we will go with American Partnership for Eosinophilic Disorders (APFED) statistic of 1 out of 2,000 people affected by the disease. As more awareness and is spread about EOE among medical professionals and individuals alike, the numbers of those affected with EOE are climbing.

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**Symptoms**

Symptoms among individuals vary based upon several different factors, such as age, developmental ability, and communication factors.

The most common symptoms among individuals are:

* Acid reflux (infant, child, adult)
* Difficulty swallowing (child, adult)
* Food impaction in esophagus (older children/teens, adults)
* Nausea/Vomiting
* Failure to thrive- due to poor appetite/pain swallowing (infant, child, rarely adult)
* Abdominal pain/chest pain (child, adult)
* Feeding refusal/intolerance/poor diet (infant, child)
* Sleeping issues (infant, child, adult)

**Diagnosis**

For a patient to be correctly diagnosed with EOE, a patient must be put on an acid suppressor for at least six weeks to rule out GERD.

         After six weeks, a doctor will perform an endoscopy. An endoscopy involves:

* Placing a patient under general anesthesia.
* Inserting a small tube (endoscope) through the mouth.
* Insert the tube down into the stomach and the first part of the small intestine.

During the endoscopy, the doctor will take several biopsies from several different locations throughout the esophagus and upper gastrointestinal (GI) area. After the endoscopy is completed, the doctor will send the biopsies of tissue samples taken during the procedure to a pathologist. The requirement of taking biopsies is crucial. During the initial inspection of the esophagus and upper GI, everything may look ok; however, tissue damage and inflammation may be present in deeper tissue layers that are unseen to the eye. A positive EOE diagnosis involves a count greater than 15 eosinophils seen under a high-powered microscope. Unfortunately, there are no non-invasive tests to diagnose EoE besides endoscopies.

Fun Fact

Eosinophils are microscopic cells that are spherical. The cells are clear in your body but under a microscope, an acidic dye changes the cell’s color to be examined. The dye changes the cell to a purple or pink color (https://my.clevelandclinic.org/health/body/23402-eosinophils).

**Treatment**

There are two main treatment methods to manage EOE. These methods include elimination diets and medications. For some patients, a combination of diet and medications are necessary.

Elimination diets can vary depending on a patient’s symptoms of suspected or known EoE triggers. Some patients may need to go on an elimination (removal of food in a person’s diet) of the top eight common food allergens: milk, wheat, egg, soy, peanuts, tree nuts, fish, and shellfish. Sometimes, a short-term temporary placement of a nasogastric (nasal) tube or a more long-term placement G-tube (tube inserted through the belly and directly to the stomach) is required in order to receive proper nourishment.

Medications like topical steroids, acid suppressors, or a combination of the two are required to manage an individuals response to EoE. Topical steroids like fluticasone or budesonide that are commonly used for the treatment of asthma are used. Instead of inhaling the topical steroids, a patient will puff the medication into their mouths, swish the medication around with their spit, and then swallow. Additionally, a patient may have to mix liquid budesonide (commonly called a “slurry”) with Splenda, apple sauce, or chocolate syrup in order to make it palatable to swallow and adhere to the esophagus as it is swallowed.

Until recently, there was no FDA approved medication for the treatment of EOE. A new medication called Dupixent sent shock waves through the EoE community when in May 2022 was approved for the treatment of EoE. Dupixent is known to target an underlying source of inflammation, which is known to be a cause of EoE (<https://www.dupixent.com/eoe/>).

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Eosinophilic-associated Diseases

* Eosinophilic gastritis (stomach)
* Eosinophilic enteritis (small bowel)
* Eosinophilic colitis (colon)
* Eosinophilic cystitis (bladder)
* Eosinophilic fasciitis (connective tissue)
* Eosinophilic asthma
* Eosinophilic pneumonia (lungs
* Eosinophilic granulomatosis with Polyangiitis (aka Churg-Strauss Syndrome- lungs, sinuses, heart, and other various organs)
* Hypereosinophilic Syndromes

Although still rare, the most common eosinophil-associated diseases are eosinophilic disorders (EGIDs) that affect the GI tract.

Links for more helpful information:

<https://apfed.org/>

<https://curedfoundation.org/index.html>

<https://www.cincinnatichildrens.org/service/c/eosinophilic-disorders>

<https://www.childrenscolorado.org/doctors-and-departments/departments/digestive-health/programs/eosinophilic-gastrointestinal-diseases/>

<https://patient.uwhealth.org/healthfacts/553>

<https://www.godairyfree.org/>