Eosinophilic Esophagitis

Eosinophilic esophagitis is an allergic inflammatory condition of the esophagus that involves the infiltration of the esophageal tissue by eosinophils. This condition likely involves an allergic response to food allergens and is frequently associated with atopic disease. Eosinophilic esophagitis typically presents with dysphagia due to the narrowing of the lumen from inflammation, edema, and strictures. Diagnosis is typically made by endoscopy with biopsy demonstrating eosinophilic infiltrates in the esophageal tissue. This condition is typically unresponsive to GERD treatment and requires elimination diet and/or pharmacotherapy with proton pump inhibitors and topical corticosteroids.



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Characteristics

History of Atopic Disease
A-top-hat Diseased-guy
About 50% of patients with eosinophilic esophagitis also have a history of some type of atopic disease (e.g., food allergies, asthma, allergic rhinitis, eczema). While the precise mechanism is unknown, it seems like allergen mediated immune system activation is the driving force of this condition.

Symptoms

Dysphagia
Dice-Fajita
Eosinophil buildup and chronic inflammation of the esophageal tissue can cause narrowing of the lumen due to swelling and/or strictures. This can lead to difficulty swallowing (dysphagia). Patients often present with dysphagia to solids as the narrowing is usually not severe enough to cause difficulties swallowing liquids.

Diagnosis

Endoscopy with Biopsy
Endoscope with Biopsy-needle
Endoscopy with biopsy is the diagnostic study of choice for the confirmation of eosinophilic esophagitis. Characteristic findings on endoscopy include longitudinal mucosal furrows, fixed esophageal rings, narrowed lumen, corrugated mucosa, and strictures.

Eosinophilic Infiltrate
Eosinophilic-Eagles In a Sarcophagus
Eosinophils are white blood cells that increase in response to allergen mediated immune system activation. In patients with eosinophilic esophagitis, eosinophils infiltrate and accumulate in the esophageal tissue. This buildup of eosinophils can lead to chronic inflammation of esophageal mucosa. Biopsy of the tissue reveals at least 15 eosinophils per high-power field infiltrating esophageal mucosa.

Unresponsive to GERD Therapy
Ant-acid-bottle and H2 Block-man Ignored By Girdle-Girl
GERD therapy (e.g., antacids, H-2-receptor blockers) is usually ineffective in patients with eosinophilic esophagitis. Dietary modifications (e.g., removal of the allergen) is crucial for the effective control of disease activity, and proton pump inhibitors or topical steroids can be used as initial pharmacologic agents.

Interventions

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Elimination Diet

Food Being Eliminated

One of the initial treatment options for eosinophilic esophagitis is elimination diet. A six-food elimination diet or a four-food elimination diet are both viable options. Foods that are eliminated typically include common allergens (e.g., dairy products, wheat, egg, soy). This approach to treatment should be coordinated with a dietician since elimination diet can result in restriction of calories and nutrients.

Proton Pump Inhibitors (PPIs)

Proton Pump with Inhibiting-chains

Proton pump inhibitors are one of the first-line medications for eosinophilic esophagitis. The clinical response should be evaluated after an 8-week course of treatment. At the end of the 8-week course, endoscopy is also frequently done to evaluate histologic response.

Topical Glucocorticoids

Top-hat Quarter-on-steroids

Topical glucocorticoids are also first-line medications for eosinophilic esophagitis. Fluticasone treatment for 4-8 weeks is typically recommended. The drug is sprayed in the back of the mouth, and the patient is instructed to swallow so that the drug coats the mucosal surface of the esophagus.

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