

Gastroesophageal reflux disorder explained: Causes, symptoms, and treatment options.

Samir Jacobson*

Department of Gastroenterology, Changi General Hospital, Singapore

Introduction

Gastroesophageal Reflux Disorder (GERD) is a chronic condition that affects the digestive system, specifically the esophagus and stomach. It occurs when stomach acid frequently flows back into the tube connecting the mouth and stomach, known as the esophagus. This backwash of acid, or acid reflux, can irritate the lining of the esophagus and lead to GERD. Understanding the causes, symptoms, and treatment options for GERD is crucial for managing this prevalent disorder effectively [1].

The primary cause of GERD is the malfunctioning of the lower esophageal sphincter (LES). The LES is a ring of muscle at the bottom of the esophagus that acts as a valve, allowing food and liquids to pass into the stomach and then closing to prevent stomach contents from flowing back up. In individuals with GERD, the LES is weak or relaxes inappropriately, permitting stomach acid to flow back into the esophagus. Several factors can contribute to this malfunction, including obesity, pregnancy, smoking, certain medications, and dietary habits [2].

Obesity is a significant risk factor for GERD, as excess body weight increases abdominal pressure, which can cause the LES to open inappropriately. Pregnancy can have a similar effect due to the increased pressure on the abdomen from the growing fetus. Smoking is another contributing factor, as it reduces LES pressure and impairs saliva production, which normally helps neutralize stomach acid. Certain medications, such as antihistamines, calcium channel blockers, and antidepressants, can also affect LES function. Additionally, dietary habits, such as consuming large meals, eating late at night, or eating trigger foods like fatty or fried items, chocolate, caffeine, alcohol, and spicy foods, can exacerbate GERD symptoms [3].

The symptoms of GERD can vary in severity and frequency, but the most common symptom is heartburn, a burning sensation in the chest that often occurs after eating and might be worse at night. Other symptoms include regurgitation of food or sour liquid, difficulty swallowing, the sensation of a lump in the throat, and chest pain. Some individuals may also experience chronic cough, laryngitis, and new or worsening asthma, which can be attributed to the acid reflux irritating the airways [4].

Diagnosing GERD typically involves a combination of patient history, physical examination, and diagnostic tests. The patient's symptoms, their frequency, and severity are crucial in the initial assessment. If GERD is suspected, doctors might recommend lifestyle and dietary changes as a first-line treatment. For a more definitive diagnosis, several tests can be conducted. An upper endoscopy allows the doctor to examine the inside of the esophagus and stomach and take biopsies if necessary. Esophageal pH monitoring measures the amount of acid in the esophagus over a 24-hour period, providing direct evidence of acid reflux. Manometry can measure the rhythmic muscle contractions in the esophagus when swallowing, the coordination and force exerted by the esophagus muscles, and the functioning of the LES [5].

Treatment for GERD often begins with lifestyle and dietary modifications. Patients are advised to avoid foods and drinks that trigger symptoms, eat smaller meals, avoid eating before bedtime, lose weight if overweight, and elevate the head of their bed. Smoking cessation is also recommended. Over-the-counter medications can be effective for managing mild GERD symptoms. Antacids, such as Tums, Maalox, and Mylanta, neutralize stomach acid and provide quick relief. H₂-receptor antagonists, like ranitidine (Zantac) and famotidine (Pepcid), reduce acid production. Proton pump inhibitors (PPIs), such as omeprazole (Prilosec) and esomeprazole (Nexium), are more potent acid blockers that can help heal the esophagus [6].

For patients with more severe GERD or those who do not respond to lifestyle changes and over-the-counter medications, prescription medications might be necessary. These include stronger doses of H₂-receptor antagonists and PPIs. In some cases, medications that help the LES function better, such as baclofen, can be prescribed. When medication and lifestyle changes do not effectively control GERD symptoms, surgical options might be considered. The most common surgery for GERD is fundoplication. During this procedure, the top of the stomach is wrapped around the LES to tighten the muscle and prevent reflux. This can be done through traditional open surgery or a less invasive laparoscopic approach. Another option is the LINX device, a ring of tiny magnetic beads that is wrapped around the junction of the stomach and esophagus to keep the LES closed to refluxing acid but open to allow food to pass through [7].

In addition to these treatments, there are newer, less invasive procedures available. Endoscopic techniques, such as

*Correspondence to: Samir Jacobson, Department of Gastroenterology, Changi General Hospital, Singapore. E-mail: Jacobson@cgh.sg.com

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transoral incisionless fundoplication (TIF), involve creating a barrier between the stomach and the esophagus using a device inserted through the mouth. This procedure can be an option for patients who cannot undergo traditional surgery [8].

Living with GERD can significantly impact the quality of life. Chronic heartburn and regurgitation can be distressing and interfere with daily activities and sleep. It's important for individuals with GERD to work closely with their healthcare provider to manage the condition effectively. This often involves a combination of lifestyle modifications, medication, and possibly surgical intervention [9].

Preventing GERD involves addressing the risk factors and making appropriate lifestyle changes. Maintaining a healthy weight, eating a balanced diet, avoiding foods and beverages that trigger reflux, not eating close to bedtime, quitting smoking, and avoiding excessive alcohol consumption can all help reduce the risk of developing GERD [10].

Conclusion

GERD is a manageable condition, but it requires attention to lifestyle, diet, and potentially long-term medication use. With appropriate management, most people with GERD can find relief from their symptoms and prevent the complications associated with chronic acid reflux. Early diagnosis and proactive treatment are key to managing this common yet often underappreciated disorder. Understanding the causes, recognizing the symptoms, and exploring the treatment options available can empower individuals to take control of their health and improve their quality of life despite having GERD.

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