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GASTROESOPHAGEAL REFLUX DISEASE: ETIOLOGY, CLINICAL PRESENTATION, CLASSIFICATION, DIAGNOSIS, AND TREATMENT METHODS

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Abstract

Gastroesophageal reflux disease (GERD) is a chronic condition in which gastric and/or duodenal contents regularly flow back into the esophagus. This process is accompanied by heartburn, regurgitation, and retrosternal discomfort. Recurrent reflux episodes damage the mucosal lining of the distal esophagus and lead to esophagitis (an inflammation of the esophageal lining), while certain patients develop Barrett's esophagus (intestinal metaplasia of the esophageal mucosa) [1][5].

In terms of prevalence, GERD ranks first among all gastroenterological disorders. [6,7]. Up to 40% of the adult population is affected. However, the prevalence of the disease varies by the region: GERD is more common in the United States, Italy, New Zealand, and Middle Eastern countries than in East Asian countries (such as China, Japan, and others).[1].

In Russia, GERD is found in approximately 18–46% of adults, and esophagitis is diagnosed in 45–80% of patients with this condition. [2]. The prevalence of reflux esophagitis increases with age, and its complications are more commonly detected in patients over 50 years old. GERD without reflux esophagitis occurs with similar frequency in men and women, whereas GERD with reflux esophagitis is more prevalent among men.[4].

Esophagitis is found in 5–6% of the general population. Among affected individuals, 65–90% have mild to moderate esophagitis, while 10–35% present with a severe form. The prevalence of Barrett's esophagus among patients with esophagitis approaches 8%.

Keywords: Gastroesophageal reflux disease, dysphagia, regurgitation

Introduction

Pathophysiology

The pathophysiology of GERD primarily involves dysfunction of the gastroesophageal junction (GEJ). The GEJ serves as an antireflux barrier composed of the lower esophageal sphincter and the diaphragmatic crura, functioning together with esophageal acid clearance mechanisms and the integrity of the esophageal mucosa. Reflux esophagitis develops when the reflux of gastric contents triggers the release of cytokines and chemokines, which induce inflammation and contribute to symptom formation.

Other contributors to GERD symptoms may include reduced salivation, delayed gastric emptying, and esophageal hypersensitivity. Therefore, GERD should be regarded as a condition with multiple phenotypic manifestations, each requiring distinct diagnostic approaches.

Symptoms

The most common manifestations of gastroesophageal reflux include heartburn, acid regurgitation, retrosternal pain, hiccups, dysphagia (difficulty in the passage of the food bolus through the esophagus), and regurgitation. Less frequently, patients may experience a sensation of a lump in the throat, odynophagia, excessive salivation, and nausea. Symptoms tend to worsen when a person consumes foods or beverages that trigger reflux (the list varies individually) or when lying in a horizontal or bent-forward position. Some patients report a sensation of gastric fullness and abdominal bloating, even after ingesting a small amount of food. In addition, atypical—i.e., non-gastrointestinal—symptoms may occur, such as cough, hoarseness, gingival burning, and left-sided chest pain unrelated to cardiovascular disease.

Classification and Forms

GERD is divided into two major forms:

- Non-erosive — accounting for approximately two-thirds of all cases;
- Erosive esophagitis — observed in about one-third of patients.

Los Angeles Classification of Reflux Esophagitis - this system grades the severity of erosive forms of GERD as follows:

- Grade A — one (or more) mucosal break no longer than 5 mm that does not extend between the tops of two mucosal folds;
- Grade B — mucosal breaks >5 mm that do not extend between the tops of two mucosal folds;
- Grade C — one (or more) mucosal break that is continuous between the tops of two or more mucosal folds but which involve less than 75% of the circumference (i.e., ≥25% of the mucosa remains intact);
- Grade D — one (or more) mucosal break which involves at least 75% of the esophageal circumference.

Savery–Miller Classification - this system evaluates the severity of mucosal damage based on endoscopic findings:

- Grade I — isolated erosions with associated erythema;
-Grade II — confluent erosions involving a substantial portion, but not the entirety, of the distal esophageal mucosa;
-Grade III — erosions involving the entire mucosal surface of the distal esophagus;
-Grade IV — chronic complications such as strictures, deep ulceration, or precancerous changes (Barrett's esophagus).

Diagnostics

Esophagogastroduodenoscopy (EGD), also referred to as fibrogastroduodenoscopy (FGD), is an endoscopic examination of the esophagus, stomach, and duodenum. EGD allows for detailed assessment of the mucosal surfaces and facilitates the diagnosis of reflux disease and hiatal hernia.

-Video esophagogastroduodenoscopy (VEGD) is an endoscopic examination of the esophagus, stomach, and duodenum performed using a video-gastroscope, which enables both real-time visualization and digital recording of the procedure. The recorded video can be reviewed by another specialist and may be useful for expert panels in complex or disputed cases.

-Fluoroscopic examination of the esophagus and stomach is a non-invasive imaging method that allows assessment of the shape, size, function, and anatomical position of the esophagus, stomach, and duodenum, as well as identification of structural abnormalities and pathological changes.
-Twenty-four-hour esophageal pH monitoring enables the determination of the frequency and duration of reflux episodes and facilitates individualized selection of pharmacologic therapy. This diagnostic method is considered the most informative for GERD, with a sensitivity of 88–96% and specificity of 85–100%.

Treatment

-Alginate-based therapies — form a protective gel barrier on the surface of gastric contents, thereby preventing reflux (e.g., *Gaviscon*, *Gaviscon Forte*);
-Prokinetic agents — enhance gastrointestinal motility (e.g., *Metoclopramide*, *Domperidone*).
-Antisecretory agents — reduce gastric acid production; proton pump inhibitors (PPIs) are the most commonly prescribed drugs in this class (e.g., *Omeprazole*, marketed as *Omez*, *Gastrozol*, etc.).
If GERD occurs without erosions or with only single erosions of the esophagus (Los Angeles grade A esophagitis), therapy is continued for 4 weeks. In cases with multiple erosions (grades B, C, or D esophagitis) or GERD-related complications, treatment is prescribed for at least 8 weeks..

References

1 Katz P.O., Dunbar K.B., Schnoll-Sussman F.H., Greer K.B. et al. ACG Clinical guideline for the diagnosis and management of gastroesophageal reflux disease. Am. J. Gastroenterol. 2022; 117(1): 27–56. DOI: 10.14309/ajg.0000000000001538
2 Yadlapati R., Gyawali C.P., Pandolfino J.E. AGA Clinical practice update on the personalized approach to the evaluation and management of GERD: expert review. Clin. Gastroenterol. Hepatol. 2022; 20(5): 984–94.e1. DOI: 10.1016/j.cgh.2022.01.025
3 Katz P.O., Dunbar K.B., Schnoll-Sussman F.H., Greer K.B. et al. ACG Clinical guideline for the diagnosis and management of gastroesophageal reflux disease...4 Там же.
5 Gyawali C.P., Kahrilas P.J., Savarino E., Zerbib F. et al. Modern diagnosis of GERD: the Lyon Consensus. Gut. 2018; 67(7): 1351–62. DOI: 10.1136/gutjnl-2017-314722
6 Gyawali C.P., Carlson D.A., Chen J.W., Patel A. et al. ACG Clinical guidelines: clinical use of esophageal physiologic testing. Am. J. Gastroenterol. 2020; 115(9): 1412–28. DOI: 10.14309/ajg.0000000000000734
7 Ивашкин В.Т., Маев И.В., Трухманов А.С., Лапина Т.Л. и др. Рекомендации Российской гастроэнтерологической ассоциации по диагностике и лечению гастроэзофагеальной рефлюксной болезни. Российский журнал гастроэнтерологии, гепатологии, колопроктологии. 2020; 30(4): 70–97. DOI: 10.22416/1382-4376-2020-30-4-70-97.