



NATIONAL JOURNAL OF RESEARCH IN AYURVED SCIENCE

Article Received Date: 23/02/2026 Reviewed on Date: 27/03/2026 Accepted on: 10/04/2026

Literature review of concept of A gastroesophageal reflux disease (GERD).

Ganesh Aravind Sutar,

Assistant Professor, Rognidan and Vikrutividnyan Department,

Late Kedari Redekar Ayurvedic Mahavidyalaya, Gadhinglaj, Maharashtra, India

Author Correspondence: vaidyaganesh609@gmail.com

Abstract:

A gastroesophageal reflux disease (GERD) is a chronic digestive condition where stomach acid or contents flow back into the esophagus, leading to symptoms such as heartburn and regurgitation. GERD is prevalent globally, affecting about 15.6%–30% of the population in India, with its incidence rising, particularly in urban areas. Contributing factors include dietary habits like overconsumption of specific foods, lifestyle choices such as stress and irregular eating patterns, and physical factors like obesity and Hiatus hernias.

Keywords: Reflux, GERD, Hiatus hernia.

1. Introduction -

A persistent digestive condition known as gastroesophageal reflux disease (GERD) causes stomach acid or stomach contents to reflux back into the oesophagus. Heartburn and regurgitation are indications of this reflux, which irritates the lining of the

oesophagus. One of the most prevalent gastrointestinal conditions in the world is GERD. If left untreated, it can seriously impair quality of life and result in consequences. Reduced quality of life has detrimental effects on social activities and labor productivity in addition to overall health, which has a financial impact (absenteeism, pharmaceutical costs, medical consultations, lost working hours, etc.). Acid-suppressive drugs, especially proton pump inhibitors (PPIs), are typically started when GERD is suspected. However, up to 40% of these PPI-treated patients may not respond to treatment at all or only partially¹⁻³.

2. AIM AND OBJECTIVES:

- 1) To study the concept of gastroesophageal reflux disease (GERD).
- 2) To study management of gastroesophageal reflux disease (GERD)

3. MATERIAL-METHODE:

1) Related modern textbooks also referred for modern references.

4. Definition:

Retrograde flow of stomach contents into the esophagus or beyond into other areas, such as the oral cavity, larynx, or lungs, is a condition known as gastroesophageal reflux disease (GERD), which mostly causes irritation of the esophageal mucosa.⁴

5. Epidemiology

According to recent studies, the prevalence of GERD in India has significantly increased to approximately 15.6%–30% of the population, which is frequently comparable to Western countries. The prevalence is estimated to be between 7.6% and 30%. It affects more than 20–30% of adults⁵ and is becoming more prevalent in urban areas. It is strongly associated with obesity, diet, and lifestyle.

6. Etiology:

Diet: Overindulgence in curd, white rice, sesame, black grams, mustard, fish, vinegar, drum sticks, and carom seeds

Dietary habits: Food habits include irregular mealtimes, eating too late at night, consuming spicy meals, consuming a lot of sour and salty foods, and overindulging in fermented foods.

Life style: Stressful daily schedule, inadequate sleep at night, falling asleep right after eating, lack of rest, repression of cravings, anxiety, and exposure to extreme heat

7. Risk factors⁶:

- **Physical Factors:** pregnancy, smoking, hiatal hernias, and obesity (extra belly fat).
- **Dietary Factors:** Citrus fruits, mint, chocolate, caffeine, spicy meals, high fat diets, and carbonated drinks.
- **Lifestyle Habits:** eating rapidly eating heavy meals, and eating within three hours of going to bed.
- **Medications:** NSAIDs (aspirin, ibuprofen), sedatives, antidepressants, antihistamines, and calcium channel blockers
- **Medical Conditions:** delayed gastric emptying (gastroparesis), diabetes, and scleroderma.
- **Other Potential Factors:** High levels of anxiety, despair, and stress

8. Pathophysiology⁷

The esophagogastric junction (EGJ), the esophageal body, and mechanisms of visceral sensitivity modulation mediated by the central and peripheral nerve systems are all involved in the process by which gastroesophageal reflux produces GERD. GERD develops as a result of an imbalance between aggressive and protective forces. The lower esophageal sphincter (LES), saliva, peristalsis, and the angle of esophageal transit through the hiatus (angle of His) are the primary protective factors. Transient relaxations of the lower esophageal sphincter, hypotension of the LES, refluxed gastric acid pH, and enhanced distensibility of the LES, extended esophageal clearance, decreased gastric emptying speed, and hiatus hernia are examples of aggressive factors.

9. Clinical manifestations (signs and symptoms)

- **Heartburn:** A burning feeling under the breastbone that gets worse when you eat, lie down, or bend over.
- **Regurgitation:** The effortless retrograde passage of stomach contents into the mouth, usually while lying down or after a meal.
- **Esophageal chest pain:** soreness in the retrosternum that could be mistaken for heart pain
- **Chronic Cough:** A persistent cough brought on by reflux episodes, either by microaspiration of refluxed stomach contents or by a reflex mechanism.
- **Belching:** Both gastric and supragastric belching can cause reflux or happen on their own.
- Laryngitis, hoarseness, and voice changes may be caused by refluxed stomach material irritating the vocal cords.
- **Dysphagia:** food or bolus transit impairment in the esophagus, usually due to a stricture

10. Diagnostic assessment: ⁸

- Endoscopy
- Ambulatory reflux
- monitoring
- Esophageal manometry
- Barium esophagogram
- Functional lumen imaging probe

11. Differential diagnosis⁹

- Eosinophilic esophagitis: Food impaction and allergies are its defining characteristics; a biopsy reveals a high eosinophil level.

- **Functional Heartburn/Chest Pain:** Heartburn symptoms without endoscopic evidence of reflux that do not improve with PPI medication.
- **Esophageal Motility Disorders:** Disorders such as achalasia or esophageal spasms can mimic reflux by causing chest pain and difficulty swallowing.
- **Peptic Ulcer Disease/Gastritis:** Upper abdominal pain resulting from stomach inflammation or ulcers, frequently caused by H. pylori.
- **Infectious Esophagitis:** Immunocompromised patients frequently develop an esophageal infection (such as Candida).
- **Pill-induced Esophagitis:** When drugs like potassium chloride or NSAIDs directly damage the esophagus.
- **Cardiovascular Disease:** Since ischemic heart disease can mimic GERD, it must always be ruled out when patients report with non-cardiac chest discomfort.
- **Abnormalities in Structure:** Peptic strictures, pyloric stenosis, or hiatal hernia.

12. Complications :^{10,11}

- **Erosive esophagitis and ulcers:** inflammation and erosions of the lining of the esophagus that can develop into bleeding ulcers
- **Schatzki rings and peptic strictures:** scarring that constricts the esophagus, resulting in food impaction and dysphagia (difficulty swallowing); these conditions frequently follow chronic esophagitis.
- **Barrett's esophagus,** the most common consequence of persistent GERD and a

major indicator of cancer risk, is a precancerous alteration where normal squamous lining turns columnar.

- Barrett's disease and chronic GERD are closely associated with esophageal adenocarcinoma, a cancer of the lower esophagus with a low absolute risk.

13. Pharmacological management ^{12,13}

Medicine	Use as per condition	Effectiveness
PPIs (omeprazole, etc.)	First line of treatment for maintenance, healing, and symptom relief	Most effective: Use the lowest effective dose for maximum effectiveness; long-term safety indications but unclear causality
H2 blockers	symptoms that are mild, sporadic, or occur at night	Less potent; added occasionally before bed.
Antacids/alginate	On demand relief	Short - acting; Alginates operate as a "raft" barrier.
PCABs	Strong acid suppression as an alternative	Faster onset
Prokinetics, baclofen, neuromodulators	Selected refractory cases	Additional adverse effects include hypersensitivity and problems with motility.

14. Lifestyle management: ^{14,15}

- Loss of weight, quitting smoking, avoiding large or late meals, avoiding trigger foods, abstaining from alcohol, and raising the head of the bed are all frequently advised and can greatly lessen symptoms, particularly in cases of moderate GERD.
- In certain patients, diaphragmatic/yogic breathing, stress reduction, cognitive behavioural therapy, and hypnotherapy may alleviate refractory symptoms and lessen the requirement for PPIs.

15. Discussion:

- The condition involves complex pathophysiological mechanisms, highlighting an imbalance between aggressive factors that promote reflux and protective mechanisms like the lower esophageal sphincter. Common clinical manifestations include heartburn, regurgitation, esophageal chest pain, chronic cough, belching, and dysphagia. Diagnosis typically involves endoscopic procedures and imaging techniques.

- Conclusion:
- Differential diagnoses must exclude conditions like eosinophilic esophagitis, functional heartburn, and cardiovascular disease. Complications can arise from chronic GERD, such as erosive esophagitis, Barrett's esophagus, and increased cancer risk.
- Management includes proton pump inhibitors as first-line treatment, with lifestyle modifications being instrumental in symptom relief. Recommended strategies involve weight loss, cessation of smoking, dietary adjustments, and stress-relief techniques to improve patient outcomes effectively.

References:

1. Bytzer P, Jones R, Vakil N, Junghard O, Lind T, Wernersson B, et al. Limited ability of the proton-pump inhibitor test to identify patients with gastroesophageal reflux disease. *Clin Gastroenterol Hepatol.* 2012; 10:1360-6.
2. Domingues G, Moraes-Filho JPP, Fass R. Refractory Heartburn: A Challenging Problem in Clinical Practice. *Dig Dis Sci.* 2018; 63:577-82.
3. Yadaplati R, Pandolfino JE. Personalized approach in the work-up and management of gastroesophageal reflux disease. *Gastrointest Endoscopy Clin N Am.* 2020; 30:227-38.
4. https://www.ncbi.nlm.nih.gov/books/NBK554462/#_NBK554462_dtls
5. PUBMED, Prevalence and risk factors for gastroesophageal reflux disease in the Indian population: A meta-analysis and meta-regression study, 6 January 2021, Volume 40, pages 209–219, (2021),
6. Pubmed- Risk factors for gastroesophageal reflux disease: a population-based study Sepehr Sadafi 1, Ali Azizi 2,, Yahya Pasdar 4, Ebrahim Shakiba 2, Mitra Darbandi
7. 7 - Mittal RK, Balaban DH, Epstein FH. The esophagogastric junction. *N Engl J Med.* 1997; 336: 924-32.
8. Gyawali CP, Yadlapati R, Fass R, et al. updates to the modern diagnosis of GERD: Lyon consensus 2.0. *Gut.* 2024; 73:361–371. doi:10.1136/ gutjnl-2023-33061
9. <https://pubmed.ncbi.nlm.nih.gov/> Diagnosis and Management of Gastroesophageal Reflux Disease in Infants and Children: from Guidelines to Clinical Practice Jeaneth Indira Gonzalez Ayerbe, Bruno Hauser, Silvia Salvatore, Yvan Vandenplas
10. Pisegna, J., Holtmann, G., Howden, C., Katelaris, P., Sharma, P., Spechler, S., Triadafilopoulos, G., & Tytgat, G. (2004). Review article: oesophageal complications and consequences of persistent gastro-oesophageal reflux disease. *Alimentary Pharmacology & Therapeutics,* 20. <https://doi.org/10.1111/j.1365-2036.2004.02240.x>.
11. Belhocine, K., & Galmiche, J. (2009). Epidemiology of the Complications of Gastroesophageal Reflux Disease. *Digestive Diseases,* 27, 7 - 13. <https://doi.org/10.1159/000210097>.
12. Katz, P., Dunbar, K., Schnoll-Sussman, F., Greer, K., Yadlapati, R., & Spechler, S.

- (2021). ACG Clinical Guideline for the Diagnosis and Management of Gastroesophageal Reflux Disease.. The American journal of gastroenterology. <https://doi.org/10.14309/ajg.00000000000001538>.
13. Visaggi, P., Bertin, L., Pasta, A., Calabrese, F., Ghisa, M., Marabotto, E., Ribolsi, M., Savarino, V., De Bortoli, N., & Savarino, E. (2024). Pharmacological management of gastro-esophageal reflux disease: state of the art in 2024. *Expert Opinion on Pharmacotherapy*, 25, 2077 - 2088. <https://doi.org/10.1080/14656566.2024.2416585>.
14. Kröner, P., Cortés, P., & Lukens, F. (2021). The Medical Management of Gastroesophageal Reflux Disease: A Narrative Review. *Journal of Primary Care & Community Health*, 12. <https://doi.org/10.1177/21501327211046736>.
15. Shashi, B., & Hafsa, S. (2024). Current Advances in Diagnosis, Therapeutics, and Surgical Interventions for the Management of Refractory Gastroesophageal Reflux Disease (GERD): An Update. *Cureus*, 16. <https://doi.org/10.7759/cureus.69001>.

Conflict of Interest: None

Source of funding: Nil

Cite this article:

Ganesh Aravind Sutar. "Literature review of concept of A gastroesophageal reflux disease (GERD)".

(2026), *Ayurlog: National Journal of Research in Ayurved Science*, 14(02),

<https://www.ayurlog.com/index.php/ayurlog/article/view/1359>.