

GERD a Negligence in the Contemporary Life

Muthukumar Raman*

Professor, Department of General Surgery, Melmaruvathur Adhiparasakthi Institute of Medical Sciences and Research, India

***Corresponding Author:** Muthukumar Raman, Professor, Department of General Surgery, Melmaruvathur Adhiparasakthi Institute of Medical Sciences and Research, India.

Received: November 27, 2019; **Published:** November 29, 2019

Introduction

Gastroesophageal reflux disease (GERD) is a very common digestive disorder worldwide. Approximately half of all adults will report reflux symptoms at some time. According to the Montreal definition, GERD is a condition of troublesome symptoms and complications that result from the reflux of stomach contents into the esophagus. Diagnosis of GERD is typically based on classic symptoms and response to acid suppression after an empiric trial. GERD is an important health concern as it is associated with decreased quality of life and significant morbidity. Successful treatment of GERD symptoms has been associated with significant improvement in quality of life, including decreased physical pain, increased vitality, physical and social function, and emotional wellbeing which is achieved by multidisciplinary approach. While GERD became an usual illness for most of the people, its treatment and patient care has been drastically fallen in the recent years which had lead to unresolved problem for most of the patient. Left untreated, GERD can result in several serious complications, including esophagitis and Barrett's esophagus. Changes of Barrett's esophagus may extend proximally from the gastroesophageal junction and have the potential to progress to esophageal adenocarcinoma.

Multidisciplinary approach

There are four approaches for GERD treatment, including medication and surgery. Often, patients respond well to a combination of lifestyle changes and a medication regimen.

Some patients do not find satisfactory relief from those methods and require surgical intervention. Other patients may choose surgery as an alternative to a lifetime of taking medication.

Treatment for GERD includes:

- Lifestyle and dietary changes
- Medication
- Endoscopic therapy
- Surgery

Factors affecting GERD treatment:

- Prescriptions lack prokinetic drugs.
- Inadequate advice of doctors and misconception of patients for lifestyle changes.

- Undiagnosis of hiatus hernia in GERD.
- Commission and omission in surgical management.
- Mostly in our society mismanaged by quacks because of all epigastric pain treated as gastritis only.

Role of prokinetic agents

Proton pump inhibitors (PPIs) are generally accepted as the standard treatment paradigm for GERD. Although many patients with RE have symptomatic relief with this drug alone, many patients have no symptomatic resolution. Overall, 30% of GERD patients, 10% - 15% of RE patients, and 40% - 50% of NERD patients do not experience symptom alleviation with conventional PPI therapy. New PPI formulations and regenerative types of acid-suppressive drugs for GERD are urgently needed. Prokinetics are agents that increase lower esophageal sphincter pressure (LES), enhance esophageal peristalsis, and augment gastric emptying. These include 5-hydroxytryptamine (5-HT) receptor agonists, GABA-B receptor agonists, dopamine receptor antagonists, and others. 5-HT receptor agonists increase acetylcholine release from parasympathetic nerve roots and promote gastric emptying and bowel motility and are frequently used in combination with PPI therapy. Cisapride is a canonical prokinetic agent with equal efficacy as a 5-HT₄ receptor agonist and a H₂ histamine receptor antagonist. In addition to protecting the esophageal mucosa, it was reported that Cisapride increased LES and esophageal peristaltic amplitude. Mosapride, another 5-HT₄ agonist, is a structural analog of cisapride with less cardiac side effects. It has been approved in Asia for the treatment of some functional gastrointestinal disorders, such as functional dyspepsia. Baclofen and lesogaberan were developed as selective GABA-B agonists based on their inhibition of TLESR and reflux episodes.

Proton pump inhibitors (PPIs) are generally accepted as the standard treatment of care for gastroesophageal reflux disease (GERD). However, many patients undergoing PPI treatment have no effective symptomatic relief. Many studies have shown the clinical efficacy of adding prokinetics to PPI therapy in GERD. The efficacy and safety of combined prokinetic and PPI therapy for GERD remain significantly promising. We can appreciate huge advantage on addition of prokinetics to a PPI therapeutic regimen. However, this combination therapy may remain dormant and its use was seen only among few doctors, which has a great set back for the patients who suffer from GERD.

Lifestyle modification

GERD is a multifactorial process and one of the most common diseases. Causes of GERD are not clear, although it is recognized that increased transient lower esophageal sphincter relaxations and the presence of significant hiatal hernia contribute to development of the disease. Typically, GERD begins in the middle age, suggesting that various environmental and lifestyle factors may contribute to its pathophysiology. Dietary factors such as shorter dinner-to bed time, a high dietary fat intake, obesity, and smoking have been implicated in increasing the risk for GERD. Other lifestyle factors include stress, major negative life events, and alcoholism. Furthermore, residents in rural areas and those with a positive family history are associated with a higher risk of GERD. Socioeconomic status and a "westernized" diet, suggested as potential risk factors, have not been confirmed yet. Estimates of the actual prevalence of GERD are difficult to obtain, because individuals seeking health care probably represent only the tip of the iceberg.

Hiatus hernia

The gastroesophageal junction is anatomically and physiologically complex and vulnerable to dysfunction by several mechanisms. The unifying theme of mechanisms of reflux disease is that they result in increased esophageal acid exposure. Evidence suggests that hiatus hernia is a significant factor in many instances. However, the importance of hiatus hernia is obscured by imprecise definition and all-or-none thinking; it is more accurate to view hiatus hernia as a continuum of progressive disruption of the gastroesophageal junction. There are at least three potentially significant features of a hiatus hernia: axial length during distention, axial length at rest, and competence of the diaphragmatic hiatus. Although any or all of these features may be abnormal in a particular instance of hiatus

hernia, each is probably of different significance. Large hernias are of greater significance than „borderline” hernias. Presumably, the phrenoesophageal membrane, which is stretched during each peristaltic contraction and challenged during each episode of increased intra-abdominal pressure, gradually loses its elastic recoil with the years. Mechanistically, the gastroesophageal junction must protect against reflux both in static and dynamic conditions. In static conditions, unless extremely hypotensive, the smooth muscle LES has adequate tone to protect against reflux. In this circumstance, reflux can only occur by tLESR.

However, during dynamic stresses such as swallowing or abrupt increases in intra-abdominal pressure, gastroesophageal junction competence is dependent upon both the LES and the diaphragmatic sphincter. During abrupt increases in intra-abdominal pressure, the crural diaphragm normally serves as a „second sphincter,” and this mechanism is substantially impaired in individuals with a gaping hiatus. During swallowing, the crural diaphragm functions as a one-way valve, permitting flow only during expiration when the pressure gradient favors ante-grade flow to the stomach. Large hernias impair the process of esophageal emptying thereby prolonging acid clearance time (especially while in the supine posture). Thus, although hiatus hernia may or may not be involved at the inception of reflux disease as an initiating factor, it clearly can be a significant contributor to the chronicity of disease, acting as a sustaining factor.

Surgical intervention

Surgical intervention are quite rare nowadays in terms of GERD management. However, necessity arises when the patient remains symptomatic in spite of conservative management and in severe form of disease. Patients with severe gastroesophageal reflux disease (GERD). Have several surgical options to manage their reflux burden. Nissen fundoplication, which prevents transient lower esophageal sphincter relaxations, involves a 360-degree wrap around the lower esophageal sphincter, whereas a Toupet fundoplication involves a 180-degree wrap. Both Procedures have associated side effects, mainly persistent dysphagia (approximately 2% incidence) postprandial bloating (35% - 40% incidence), and the inability to belch or vomit. Efforts To augment the function or competency of a failing sphincter easily and without side effects or the need for extensive alteration of the anatomy have led to the development of several sphincter augmentation devices. Transoral incisionless fundoplication with the EsophyX device (EndoGastric Solutions) is an approach to reconstructing a gastroesophageal valve using traditional anatomic principles of Nissen fundoplication. The main advantage of transoral incisionless fundoplication with EsophyX is that it is not an open laparoscopic operation. However, because it is performed endoscopically, there is considerable variability in the outcome. The LINX Procedure. Prevents effacement of the sphincter, which occurs with gastric distension or non-pressurized gastric dilation, with minimal side effects and a persistent dysphagia rate of less than 1%. A lower esophageal sphincter stimulator the size of a pacemaker (EndoStim, EndoStim BV) stimulates the sphincter electronically to increase its resistance to opening and is currently undergoing a clinical trial for the US Food and Drug Administration. The Stretta device (Mederi Therapeutics), which causes intramural fibrosis of the lower esophageal sphincter using radiofrequency energy in an attempt to reduce its compliance, appears to have some benefit, although controlled studies lack statistical difference compared to Nissen fundoplication.

When we look into the indications for surgery in GERD, Patients who fail to respond or respond poorly to acid suppression therapy should consider surgery. Importantly, if a patient does not experience full relief of symptoms with medication early in the disease, the clinician should consider recommending a simplified procedure, such as sphincter augmentation, as opposed to repetitively increasing the drug dose. As experience with sphincter augmentation procedures increases, patients who have indications or a risk of progressive disease should be considered as surgical candidates early in the course of their disease. Surgery is contraindicated in a patient who has too great of an anesthetic risk due to pulmonary or cardiac function or owing to another cause of concern [1-4].

Conclusion

Although we have advanced medical care, technologies and drugs in the current era, still the disease GERD persist in most of the adults and elder people and remains unnoticed or mismanaged by the quacks which led to set our eyes on the people sufferings. GERD is a well treatable disease if the patients comes at the right time to the right person. In addition, doctors should also pay more attention towards the proper treatment especially on the lifestyle changes which plays a pivotal role in management of GERD.

Bibliography

1. Danisa M Clarrett and Christine Hachem. "Gastroesophageal Reflux Disease (GERD)". *Missouri Medicine* 115.3 (2018): 214-218.
2. Li-Hua Ren., *et al.* "Addition of prokinetics to PPI therapy in gastroesophageal reflux disease: A meta-analysis". *World Journal of Gastroenterology* 20.9 (2014): 2412-2419.
3. Lulzim Çela., *et al.* "Lifestyle Characteristics and Gastroesophageal Reflux Disease: A Population-Based Study in Albania". *Gastroenterology Research and Practice* (2013): 936792.
4. Tom R DeMeester. "Surgical Options for the Treatment of Gastroesophageal Reflux Disease". *Gastroenterology and Hepatology* 13.2 (2017): 128-129.

© All rights reserved by Muthukumar Raman.