

GASTRO ESOPHAGEAL REFLUX DISEASE (GERD)

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Abstract: Gastroesophageal reflux disease (GERD), which affects millions of people across the world, is a common clinical problem. Here in this paper, we discuss the pathophysiology and symptoms of GERD and provide clinical information about the common disorder. The gastric oesophageal reflux is primarily a Lower Oesophageal Sphincter (LES) condition, but it may contribute to its development through several factors. In this current study, the primary aim was to evaluate the prevalence of GERD in the southern India representative population and to identify potential GERD-related factors.

Key Words: Gastroesophageal reflux disease, Lower Oesophageal Sphincter, SAGES, NERD.

1. INTRODUCTION:

Gastroesophageal reflux disease (GERD), which affects millions of people across the world, is a common clinical problem. Classical, as well as atypical signs, are known in patients. Acid Suppressive therapy provides symptomatic relief and stops other people with GERD from having complications. Improving our ability to detect and monitor disease symptoms has improved diagnostic and treatment practices. Here in this paper, we discuss the pathophysiology and symptoms of GERD and provide clinical information about the common disorder. [1] Among Western countries, the occurrence of GERD is high. In Asia, the prevalence of GERD over the last 10 years has been increasing. Probably because the socioeconomic status improved and the climate subsequently changed. There are few studies in India on GERD prevalence. Bhatia et al. estimated a 7.6 percent prevalence of GERD among Indians in a multicenter healthcare facility sample while a high GERD prevalence of 28.5 percent among workers at a tertiary clinic in southern India was registered. In this current study, the primary aim was to evaluate the prevalence of GERD in the southern India representative population and to identify potential GERD-related factors.

2. EPIDEMIOLOGY AND PATHOPHYSIOLOGY:

Older age, body mass (BMI), obesity, anxiety/depression, less fitness activity at work and other risk factors for GERD may also be included. 6-8 Food habits like acidity, size a, and timing, especially concerning sleep, may lead towards GERD. Daily recreational activity, except after-prandially, appears protective. [2]. The gastric esophageal reflux is primarily a Lower Esophageal Sphincter (LES) condition, but it may contribute to its development through several factors. Physiological and pathological factors affecting GERD. Temporary Lower Esophageal Sphincter Relaxation (TLESRs) is the most common cause. TLESRs are brief periods that are distinct from swallows of lower esophageal sphincter tone inhibition. Though these are hormonal, the duration of the postprandial process is growing and they make a significant contribution to acid reflux in GERD patients. Reasons other than this include lower pressure of esophageal sphincter, hiatal hernia, slow esophageal clearing, and slower gastric emptying.

Table 1 : Clinical Manifestations

Atypical Signs of GERD	Alarm or Warning Signs Suggesting Complicated GERD	Lifestyle Modifications
Chronic cough	Dysphagia	Height up bed head 6 - 8 inches
Asthma	Odynophagia	Reduce calories in fat in meals
Recurrent sore throat	GI bleeding	Quit smoking
Recurrent laryngitis	Iron deficiency anemia	Stop rest or 3 - 4 hours of sleep after meals.
Dental enamel loss	Weight loss	Other foods must be avoided: sugar, caffeine, peppermint, coffee and other drinks, onions, garlic, fatty food, oranges, tomatoes.
Subglottic stenosis	Early satiety	Avoid large meals
Globus sensation	Vomiting	Weight reduction

Chest pain		Medications that can induce signs must not be avoided: antagonists of the calcium channels, beta-agonists, alpha- adrenergic agonists, theophylline, nitrates, sedatives (benzodiazepines).
The onset of symptoms at age > 50		

3. DIAGNOSTIC PROCEDURES:

No gold standard is required for GERD diagnosis. In only about 40 % of cases, endoscopy is successful. The assessment is based on symptomatic symptoms and this is highly subjective. The determination of anti-reflux medication. The Practice Guidelines of the Society of American Gastrointestinal Endoscopic Surgeons (SAGES) provide that GERD is verified in cases where there are at least one of the conditions: endoscopic endoscopy, Barrett's biopsy esophagus, peptic strictness in the absence, or healthy pH-meter. This definition does not include the use of pH-meter in patients with NERD. There is therefore no satisfied need for clinicians and researchers for an impartial diagnostic tool of sufficient sensitivity and specificity. [3]

- **Manometry.** This becomes a tool which is accessible for use in children as well as infants. It is used to test oesophageal motility along with the role of the Lower Oesophageal Sphincter (LES).
- **Esophagogastroduodenoscopy.** This is an important way of viewing mucosa for pneumonic ulcer disease, Helicobacter pylori infection, restraints, and peptic esophagitis in patients who are non-response to medical therapy.
- **Histologic findings.** Basal cell hyperplasia, extended papillae, and mucosal eosinophils are included as Histologic signs of peptic esophagitis.
- **Upper GI imaging series.** These experiments are used to test the upper GI anatomy, but neither sensitive nor unique to gastroesophageal reflux is contrast imaging.
- **Gastric scintiscan.** The gastronomic scintiscan analysis will measure gastric emptying and show reflux (although not the degree of gravity of a technetium sulfur colloid).
- **Oesophagography.** The quality of oesophageal peristalsis may be illustrated by oesophagography, carried out under fluoroscopic control; however, this may not be used for assessing the degree of and extent of gastroesophageal reflux.
- **Intra-oesophageal pH probe monitoring.** The severity and frequency of reflux are documented by a continuous pH esophager in the distal oesophagus.
- **Intraluminal oesophageal electrical impedance.** EEI is suitable for the detection of reflux acid as well as nonacidic reflux by retrograde oesophageal flow measurements.

4. MEDICAL MANAGEMENT:

Drugs with GERD include medications known as H2 receptor antagonists along with proton pump inhibitors, helping reduce the stomach acid, and adding to the healing process as well as promtuciating agents to help clear fluid out of the esophagus. The drug is used to treat GERD by prescription to treat GERD. [4].

4.1. H2 Receptor Antagonists:

Since the mid-1970s, GERD has been treated by acid suppressants known as H2 receivers or H2 blockers. An H2 blocker reduces heartburn symptoms and regurgitation and is a perfect way to decrease acidic influx to help cure mild to moderate esophagus inflammation, known as "esophagitis." Symptoms are reduced with a prescribed dose of H2 blockers up to 50 percent of patients twice per day. Esophagitis cure can require an increased dose. In approximately 25 percent of patients, these antagonists maintain remission. EOLBREAK In GERD patients with mild symptoms H2 blockers is typically cheaper to suppress proton-pumps and can give an effective activation therapy or act as a support agent. Current treatment protocols also recognize that proton pump inhibitors, especially those suffering from more severe endoscopy symptoms, can be used as first-line therapy in certain circumstances and some cases are effective and beneficial. A significant percentage of heartburn / GERD patients will need Proton pump inhibitors to achieve effective long-term maintenance therapy. [5]

4.2. Proton Pump inhibitors:

PPIs have been found to repair erosive esophagitis (a serious form by GERD) quicker than H2 blockers. Proton pump inhibitors have been found in H2. Proton pumps not only ease the symptoms but also in most cases, even with esophageal ulcers, eliminate symptoms. Proton pump inhibitor therapy showed that in 75% to 100% of cases, endoscopic mucosal relief of esophagitis was possible at 6 - 8 weeks. While esophageal healing will take place within 6 - 8 weeks, gastroesophageal reflux must not be mistaken as a cure for this period. The primary focus of GERD treatment is to control symptoms and comfortably prevent complications. When described above, current guidance acknowledges

that cardiovascular diseases and GERD usually reappear, possibly chronic conditions that often reoccur symptoms and mucosal damage as medications are removed, and therefore, a long - term maintenance strategy is generally needed. Occasionally, an insurance plan is intended to extend the use of proton-pump inhibitors to a fixing duration of 2 - 3 months, and others even noted FDA's approval of proton - pump inhibitors for up to 1 year. The scientific reason for elimination of proton - pump inhibitors is not well-known after a year, because these patients would inevitably rebound. All gastroenterologists have patients with proton pump inhibitors that are still very good after many years without side effects. Besides, the efforts of payors to limit patient exposure to such drugs are cost-saving. The best long - term maintenance therapy for esophagitis, particularly in the maintenance of symptoms and remission disease for patients suffering from moderate to severe esophagitis, has been demonstrated to sustain remission for up to five years. [6]

4.3. Promotility Agents:

Drugs that facilitate the diagnosis of mild to moderately symptomatic GERD are successful. Such drugs increase the pressure of the esophagus sphincter to inhibit reflux of acids and enhance the flow in the stomach foods. We can reduce symptoms of heartburn, particularly at night, through improved acid clearance from the esophagus. The availability of one of these chemicals, cisapride, has been greatly restricted by recent developments. The treatment of GERD symptoms in children by Cisapride has been popular for several years and was also used by some physicians. More recently, several patients with cisapride have reported rare but potentially serious complications. [7]

5. SURGICAL MANAGEMENT:

5.1. Laparoscopic anti-reflux surgery

For GERD treatment the laparoscopy is used when the drugs are ineffective (also known as Nissen fundoplication). Laparoscopic anti-reflux treatment is a minimally invasive procedure that corrects gastric reflux by supplying the valve system under the esophagus with an appropriate valve mechanism.

5.2. Fundoplication:

This is the traditional GERD surgical treatment. The LES is reinforced and improved. The top of the stomach is wrapped around the exterior of the lower esophagus to reinforce the sphincter

5.3. TIF (Transoral Incisionless Fundoplication):

This is GERD's standard operating treatment. The LES is reinforced and sealed. To order to strengthen the sphincter, the lower part is bound around the outside of the lower esophagus.

5.4. Stretta Procedure:

Its procedure is done by an endoscope. It is normally done ambulatory. This is a thin, soft line threaded through the esophagus. The electrode is compressed at the end and produces minuscule holes in the esophagus tissue. The cuts make up the esophagus's scar tissue. This blocks the nerves, which respond to acid refluxation. The shaping cicatrix tissue also supports the muscles around.

5.5. Linx Surgery:

This treatment uses a special device known as a Linx. It's a small magnetic ring of titanium beads. The Linx strengthens the sphincter when wound around the LES. The beads are magnetized so that the space between the stomach and oesophagus remains closed. They move together. Normally, nourishment can still pass. Since the recovery time is minimally invasive, it is typically significantly shorter than the traditional operation. That type of surgery is also less painful. This technique is relatively new but has good results for acid reflux disease relief

6. COMPLICATIONS:

Over time, the esophagus may have chronic inflammation:

- **An open sore in the oesophagus (oesophageal ulcer).** Acid in the stomach can result in wearing the tissue in the oesophagus and form an open sore. An oesophageal ulcer also can bleed, make it painful and difficult to swallow.
- **Narrowing of the oesophagus (oesophageal stricture).** Causes damage to the lower oesophagus of stomach acid leads to the formation of scar tissue.
- **Precancerous changes to the oesophagus (Barrett's oesophagus).** Acid damage may cause tissue changes to the lower oesophagus of the tissue. These changes are linked to an increased oesophageal cancer risk.

7. COPING STRATEGIES:

- Acupressure
- Deep breathing-exercising
- Meditation
- Transcutaneous electrical nerve stimulation
- Yoga therapy

8. CONCLUSION:

In conclusion, GERD is a gastroenterology dimension that in the last 30 to 40 years has experienced immense advances and remains an extensive field of research. Innovations were made in recognizing, classifying, diagnosing, taking clinical courses and treating GERD. The GERD variant, which affects over 60% of patients suffering from GERD, is a NERD. NERD is not only heterogeneous but also special in the pathophysiology and the reaction to traditional health treatment. NERD (No erosive reflux disease). Since GERD is a chronic recurring condition, patients need to be treated after a detailed analysis of the advantages as well as disadvantages of each modality of long - term medical treatment or operation. Several problems remain unanswered with GERD, and more studies on this important disease are expected to come in the next couple of years.

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