

COMPREHENSIVE REVIEW ON GASTRO ESOPHAGEAL REFLUX DISEASE

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Received 18th November 2016; revised accepted 9th January 2017

ABSTRACT

Gastro esophageal reflux disorder (GERD) is a general complaint worldwide and it is able to produce several complications which comprises of esophageal adenocarcinoma and esophageal stricture. There are several challenges which are linked with GERD management. Firstly, no symptoms which does not associate with the cure of esophageal abrasions. Secondly, proton pump inhibitors (PPIs), present usual maintenance for GERD are unsuccessful in the most of patients, having non-erosive ailment. GERD is prolonged complaint of gastrointestinal tract. The frequency is going to be rise worldwide. From the previous year's study, we are able to understanding its pathophysiology, clinical presentation, treatment and management. According to Montreal definition GRED, it comprises of extra esophageal indications as well as esophageal indications of this ailment, rather patient obsessed and symptom-centered. Suggestion is that this disorder can be surely detected by the indications merely.

Key words: GERD, Review, Symptoms, Epidemiology

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INTRODUCTION

This disease has a very high prevalence worldwide. According to Montreal consensus conference, Gastro esophageal reflux disease is termed as 'state arises when the flow of GIT matters produces riotous signs or else causes tricky situations [1]. Usually GERD is characterized as condition in which stomach contents pass the esophageal sphincter and have destructive effect on esophageal mucosa that leads to the development of pain as well as heartburn. Heartburn may be explained as burning feeling of pain retrosternal, frequently associated with an intensifying sensation as well as an astringent flavor in the mouth [2].

Historically, more than 45% of patients carrying esophagitis showed signs of minor notches and heat burn though Pathophysiology defines it is as a histological sign of esophagitis. GERD (Gastroesophageal reflux disease) is an increasing disease in major countries and since it is associated with quality of life of human beings, the disease is considered as an influential reason for adenocarcinoma of the esophagus. Patients may develop Low-grade dysplasia, High-grade dysplasia, Metaplasia (Barrett's esophagus), GERD and Adenocarcinoma by the irritation caused by reflux of acid and bile. The study shows that there are still rare chances of patients diagnosed with squamous cell

cancer but esophageal adenocarcinoma still remains as the foremost possibility [3].

SYMPTOMS

The symptoms are categorized into three segments, namely: Esophageal, Typical and Atypical. These segments include the following common symptoms in patients carrying GERD: Esophageal symptoms include dental erosions, chronic cough, laryngitis and asthma. Typical symptoms include acid regurgitation, heartburn. Atypical symptoms include belching, gastritis, peptic ulcer, dyspepsia, nausea, ulcer, bloating.

The above narrated symptoms, historically, are more common after meals which tend to be less relieved by lowering acidity [4].

Likewise, studies suggests that asthmatics have almost 35% to 90% chances to carry this disease while there were some patients that have described sleep disturbance, angina, pain in arms, jaw, neck and back some tends to feel nausea, dysphagia and globus sensation. Consequently, it is safer to say that the segments and categories listed under the section 'symptoms' along with recurrent pneumonitis, chronic sinusitis, night-time blocking, cryptogenic fibrosing alveolitis, inflammation of middle ear and prolonged gruffness leads to gastro esophageal reflux disease [5]

Table1: Symptoms and conditions associated with GERD [6]

Extra-esophageal symptoms	dental erosion, recurrent aspiration or pulmonary fibrosis, hoarseness, otitis media, sinusitis, inflammation of larynx, sore throat
Malignancy	head and neck cancer, esophageal adenocarcinoma
Classical symptoms	acid spewing, heartburn
Unusual symptoms	abdominal pain, globus hystericus, dysphagia

EPIDEMIOLOGY

In the European countries GERD is the most frequent GIT disorder having prevalence of about 10% to 20% but in Asian countries, the occurrence frequency of GERD is generally lower such as 2.3%. It has been estimated from Population-based survey studies that prevalence rate for this disease is rising [7].

DIAGNOSIS

Diagnosis consists of following general procedure: Endoscopy, Ambulatory reflux monitoring and Anti-secretory therapy. The most communal and regular symptoms narrated under the section ‘Symptoms Associated with GERD’ presumes the disease although the results does not conclude the authentication of GERD [8].

TREATMENT

Treatment options vary which include proton pump inhibitors (PPIs), antacids, H2RA and surgical treatment is also an option. Self-medication with Over the Counter drugs to get rid of occasional signs of GERD is common. Control of acid secretion to acceptable level is the way to treat the condition. Only one quarter GERD related patients using OTC medicines get relief from the symptoms. H2RAs is effective mainly in people having minor GERD, but turn out to be fewer-operational with time. Proton Pump Inhibitors is the important remedy for acid-linked illnesses and gives more rapidly and comprehensive characteristic assistance [9].

Lifestyle Modifications

In most of the patients, Gastro esophageal reflux disease (GERD) is currently managed pharmacologically. Other than medications, lifestyle modifications are likely to have played a greater role in managing patients’ symptoms [10]. Ecological aspects are perhaps the core reason of Gastro Esophageal Reflux Disease. Several routine aspects like weightiness, food, liquor drinking, smoking, consumption of NSAIDs including sleeping pattern, are considered to be related with GERD [11]. While being kept at the currently neglected situation, but it may seem that still many patient, their families and health personals seek advice about appropriate measures to help control the symptoms of GERD [10].

Pharmacological Alternatives

Foremost acid oppressive representatives existing for GERD patients have options like antacids, H2-receptor antagonists, and PPIs. Antacids generally don’t offer adequate acid overthrow for GERD patients. By reasonable and alterable block of H2-receptors on the delomorphous cells of the lining of stomach, H₂-receptor antagonists reduce gastric acid secretion. Besides a slower emergence of effect, H₂-receptor antagonists are particularly very activefor decreasing acid discharge than antacids [12].

Antacids

Antacid therapy is very common. For their capability to counteract refluxed acid, Antacids are operative in providing quick symptom relief. Neutralization of acid increase pH which then inactivates pepsin [13]. It is generally observed that antacids along with alginate are more effective as this solution reacts with saliva to produce an automated fence known as gastric juice for the reflux. This is due to the reason that sodium bicarbonate is present in the blend [14].

Histamine H₂-Receptor Antagonists

The patients diagnosed with minor to adequate symptoms and grades I-II esophagitis have H₂ receptor antagonists as their front line mediators which consist of either of Nizatidine, Cimetidine, Ranitidine, Famotidine. The above narrated receptors could restore only minor esophagitis in more than 70% of patients carrying GERD and also support to prevent degeneration by providing maintenance therapy. Further observation suggests that pharmacologic leniency could be used to diminish lasting effects of the drugs or in other words, Tachyphylaxis. To cater severe conditions of the patients carrying the ailment and nightly acid release; additional H₂ blocker therapy have been effective [15].

Proton Pump Inhibitors

H₂RA therapy is advised, initially, for patients on twice-daily basis and if the procedure is not effective enough, the therapy of PPI is being advised on daily basis. Several studies (RCTs) prove that PPI therapy has been approved with success rate of 83% within four to eight week period. Not only this procedure is effective physically but it is also effective monetarily. Like-wise another research suggests that PPI’s were

better in symptomatic remission within 12 months rather than placebo or H2RA. In addition to these observations, 78% patients that were treated with PPI therapy recovered aggressively within the four to eight week tenure while H2RAs and placebo achieved 50% and 24% success rate

subsequently for the same tenure. The treatment of erosive esophagitis with PPI therapy also indicated lower rate of relapsing than H2RA. Further, PPIs include Lansoprazole, Omeprazole, Pantoprazole, Rabeprazole.

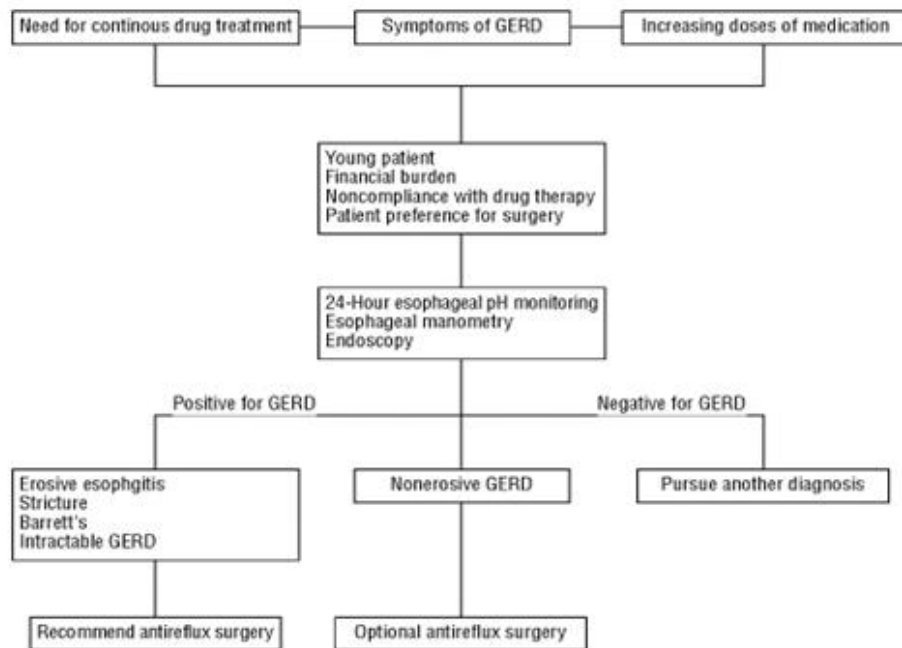


Figure 1: Surgical management of GERD patients [19]

Though Omeprazole (Prilosec) is available in generic form and it is merely cost effective than Prilosec, the treatment of GERD is recommended as it reflects no noteworthy differential. Having said that, omeprazole would be available in near future but Esomeprazole which is an S-isomer of omeprazole seems to be more promising as it has high rating in healing the disease. Likewise, this therapy also diminishes the hostile risks while minimizing the side effects to headaches and diarrhea. In the long run, from antral G cells PPIs may lead to rise in producing GI hormones, it also decrease gastric acid secretion and sometimes, a decrease in cobalamin absorption with a substantial decrease in serum vitamin B12 levels too [16].

Surgery

The complicated part of the procedure is the antireflux surgery as it is different from patient to patient. The common indications for the surgery include these scenarios: Reflux standard on 24-hour pH monitoring, large hiatal hernia, Unsuccessful medical management and Patient preference. Patients that are usually referred for surgery should have

either or all of the following symptoms: Flawed anti-reflux, Esophagitis and Esophageal motility. The surgical effectiveness, according to the research, suggest patients have 70% to 90% chances for reduction in heartburn and regurgitation. Likewise, the communal reasons for surgical referrals are Decrease in hiatal hernia, Consolidation of gastro esophageal junction–posterior diaphragm and Fundoplication. Similarly, not all patients are recommended for this surgical procedure as many studies suggests that more than 25% of the patients cease to recover effectively that were carrying the following symptoms like asthma, laryngitis, esophageal Cough [17].

Generally, surgery is recommended for young or healthy patients whom have the tendency of unproductive GORD medical management. Moreover, it is important that the symptoms are accountable for gastro esophageal reflux instead of esophageal dysmotility or non-ulcer heartburn. Though, historically, the attribution of non-acid reflux was not possible but in future it is likely that the combination of manometry, multichannel intraluminal impedance and combined pH would

make it possible to identify the potential patients [5]. Research suggests that the surgery is far more feasible procedure to cure patients rather than antacid therapy but in long run, few years after surgery victim tend to resume with medication [18].

Contraindications to Surgery

Every procedure has its limitations, likewise, patients having less tolerance for general anesthesia, inaccurate coagulopathy, severe cardiopulmonary disease and in case of laparoscopic approach, a pneumoperitoneum are not recommended. In addition, patients with historical upper abdominal surgery or foregut surgery are suggested for laparoscopic approach which has side effect or in other words potential risk of laparotomy while patients with huge fatty liver lobe are endorsed for open surgery [20].

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CONCLUSION

Form the past 40 years, GERD has been one of the major researched branch in gastroenterology which has resulted in massive improvements Definition, Clinical course, Diagnosis and Classification. It is being observed that more than 50% of the patients diagnosed with GERD were initially affected by a variant known as NERD (Non-erosive reflux disease) which is more heterogeneous and has totally different medical procedures including pathophysiology and medical therapy while in case of GERD, patients are treated either with medicine (long term) or with surgery. There are still many issues that remain un-attended about GERD and in years to come, hopefully, would be resolved successfully.

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