

Short Communication

Treatment of Gastroesophageal Reflux Disease: A call for increase awareness and local research

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Introduction

Gastro Oesophageal Reflux Disease (GORD) is a chronic and relapsing disease, defined as "Failure of antireflux barrier, allowing reflux of gastric contents into the esophagus".¹ According to the Genval Workshop, this term should be used to include all individuals who are exposed to the risk of physical complications from Gastro-esophageal reflux or who experience clinically significant impairment of health - related well being (quality of life) due to reflux - related symptoms.²

The most commonly experienced symptoms are retrosternal burning or heartburn and duration of symptoms varies from more than three months to 10 years. Upper GI endoscopy is used as the most common first line of investigation. The correlation between reflux symptoms and endoscopy-positive GORD is poor and most GORD patients

aged <50 years have endoscopy-negative GORD.²

Prolonged and untreated esophagitis can lead to complications like esophageal ulceration, stricture, Barrett's esophagus and development of adenocarcinoma. The incidence of Barrett's esophagus progressing to adenocarcinoma is estimated to be 0.5 per 100 patient-years (i.e., one in 200 patients developing carcinoma per year).³ Although GORD causes substantial morbidity, the annual mortality rate due to GORD is very low (approximately 1 death per 100,000 patients), and even severe GORD has no apparent effect on longevity, although the quality of life can be significantly impaired.⁴

According to the guidelines of Society of American Gastrointestinal Endoscopic Surgeons (SAGES), the diagnosis of GORD is made on the basis of photographic or histologic oesophageal mucosal injury i.e. Oesophagitis,

excessive reflux documented during a 24-hours intraoesophageal pH monitoring. Other investigations which are useful in the diagnosis are contrast radiologic studies e.g. barium meal scintigraphy.

Life style changes, antacids and H₂ blockers are typical initial measures which are usually tried by patients themselves or by the primary care physicians. Proton Pump Inhibitors (PPI) has revolutionarised the management of GORD. World - wide the PPIs are now among the most widely prescribed drug. In UK about 14 million prescriptions are issued per year. This is despite the fact that National Institute of Clinical Excellence (NICE) recommends that PPI should be offered in low-dose treatment, possibly on as required basis, with a limited number of repeated prescriptions. In 2002, the National Health Service (NHS) in England spent £380 million on PPI, accounting for around 7% of the total drug budget. The widespread use of proton pump inhibitors appears to have reduced the incidence of oesophageal stricture, particularly those referred to surgeons.

Apart from the cost of medical treatment other adverse effects of the medical treatment are minor and reversible. Diarrhoea, flatulence, headache, dry mouth, peripheral oedema, dizziness, sleep disturbances, fatigue, paraesthesia, arthralgia, myalgia, rash, pruritis, gynaecomastia, interstitial nephritis, hyponatraemia, alopecia and many others. There are no long term side effects and there have been no deaths attributed to PPI. However, emerging evidence indicates that PPI therapy, particularly with long-term and/or high-dose administration, is associated with several potential adverse effects, including enteric infections (e.g. *Clostridium difficile*), community-acquired pneumonia, and hip fracture, all of which have received much attention recently.⁵⁻⁷

An increase in pH with the use of PPIs, in the presence of helicobacter-associated atrophic gastritis, has the potential to lead to dysplastic change.⁸ There is growing concern regarding the potential link between potent hypochlorhydria and the increase in incidence of gastro-oesophageal malignancy. Oesophageal pH studies demonstrate that patients on PPIs still suffer from transient drops in lower oesophageal pH. In last twenty years no gastric malignancy has been attributed to PPIs and no clinically relevant changes have been observed in gastric histology.

Very often patients who suffer with symptoms of GORD self-medicate them selves with antacids, histamine-2 receptor blockers and PPIs without consulting a physician. Alarming facts reported in a recent study where factors predisposing to oesophageal carcinoma were studied. Heartburn and regurgitation were the presenting symptom in 18% and 14%, respectively, suggests that there is some risk

of missing a cancer whether patients treat themselves or are treated by physicians empirically without appropriate investigations.⁹

Medical treatment of GORD has certain limitations. The possibility is that patients would either suffer with the symptoms or end up developing a serious complication. Medical therapies do not cure reflux, but simply alter the nature of the refluxate. Reflux of gastric and duodenal contents continues unabated. Volume and nocturnal reflux sufferers often have a poor result from medical treatment. The increasing cost of medications would be an expensive proposition to keep a young bread earner of the family on long term medical maintenance therapy.

Failure of medical management to control the symptoms, development of complications of GORD e.g. Barrett's oesophagus or stricture, atypical symptoms like asthma, hoarseness of voice , cough, chest pain, aspiration and patient's choice to opt for a better quality of life without being dependant on the long-term medical therapy are the indications for the surgical options.

There have been various endoluminal procedures under investigations and development for last many years. Their initials results are encouraging. However, their long-term results are not available to recommend these procedures on a wider scale.

In the era of open surgery for GORD, the short and long-term results have achieved 87% -97% successful outcome with minimum morbidity and mortality. Laparoscopic surgery has become the popular approach to treat patients with GORD. The experts on a committee of European Association of Endoscopic Surgeons (EAES) in 1997 concluded that laparoscopic antireflux procedures are better than open procedures.¹⁰ It offers less post operative pain, decreased hospital stay, early return to work in addition to better cosmetic result and overall less financial burden to patients and community at large.

Many techniques have been developed. The very popular techniques which have been accepted widely are Nissen 360 degree fundoplication with posterior crural repair and Toupet technique with an incomplete, 270 degree fundal wrap. The short and long term results are excellent and cost effective. The success rate from many studies including thousands of patients is up to 98 % with 0 - 0.3 % mortality and less than 5% morbidity. There is a learning curve for the surgeons which reach a plateau after approximately 20-50 cases after which the operating time, length of stay and morbidity decrease.¹¹

A recent review of literature by P A Gatenby and colleagues suggest a very successful outcome with minimal complication rate. Long term dysphagia (2%), pneumothorax (2%), perforation (1%), diarrhoea (11%), bloating (9%),

reoperation (3%) and perioperative morbidity within 28 days of 3% are well recognized problems.¹² A significant improvement in Quality of Life (QOL) has been observed after laparoscopic antireflux surgery when compared to medical therapy, irrespective of the available QOL tool used.¹³

Mortality and serious morbidity cannot be easily accepted for a procedure for benign disease and especially when it is performed to improve the quality of life. Laparoscopic antireflux surgery by trained surgeons is a safe and effective option to offer to the patients and has been widely accepted by the medical professionals all over the world. Patients should be informed and explained with all honesty, whether it's being a physician or a surgeon attending, about the long-term management with PPI and option of surgical intervention. If the patients are selected rightfully there is no controversy in choosing either option. After all, to choose the type of treatment is patient's basic right which should be respected by the professionals.

The prevalence of GORD appears to be increasing and possible factors for GORD in Asian populations include *Helicobacter pylori* infection, obesity and increasing dietary fat intake. The adoption of a Western lifestyle in many developing Asian countries may account for the increasing prevalence of GORD.¹⁴

In Asia, medical treatment with histamine H2 receptor antagonists (H2RA) or proton pump inhibitors (PPI) is still the mainstay of therapy, regardless of the severity of the disease. There are few reports on the therapeutic results of this operation from Asian countries compared to the vastly expanding literature on the topic from the West in the last decade.¹⁵ With very limited literature available in Pakistan on the subject, reports have suggested that about one quarter of the urban population of the biggest city of Pakistan, Karachi suffers with GORD and out of these 33% do seek medical advice.¹⁶ An extrapolation of this data means that there are millions of patients suffering with GORD and at least thousands of patients do qualify for surgery. There are not many centers offering laparoscopic anti reflux surgery on regular basis, at least in the biggest city like Karachi (personal communication)

Lack of awareness of excellent results of laparoscopic antireflux surgery among patients, physicians and gastroenterologists, availability and cost of investigations and

surgery compared to the local cost of long term PPI or use of alternative medicine and lack of enough number of trained surgeons are possible reasons why this surgery has not been performed widely in the Asian countries. This is an area for local research and perhaps trainees could consider taking this as a topic for their dissertations. The Issue of QOL is an important one which requires further investigations at a local level. Perhaps patients are suffering with many other due and undue concerns which do not allow surgical treatment of GORD to come up at the top of their priority!

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