

Scope of Laparoscopic Anti Reflux Surgery in Pakistan

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Summary

Gastro Oesophageal Reflux Disease (GORD) is an increasing medical problem associated with poor quality of life and morbidity. Proton pump inhibitors have provided a significant advance in the medical therapy to resolve the symptoms. However surgery provides the ultimate cure. Open surgery is associated with morbidity. The development of laparoscopic antireflux surgery has revolutionized the management of GORD. Laparoscopic Anti Reflux Surgery is a safe and effective technique which is easily reproducible. It should be considered for a selected group of patients and should be performed only by well trained surgeons.

Gastro-oesophageal reflux disease (GORD) is a chronic condition and the majority of cases will require life-long treatment, either intermittently or continuously. GORD affects the major adult population of Western world and recent studies suggest that the prevalence in Asia is increasing. It may be due to more frequent recognition by the clinicians after improved diagnosis or lifestyle change in dietary fat and increased intake of carbonated drinks. The prevalence of GORD from Asian Pacific region in early 90's was reported at 2-6% which is very low as compared to the Western countries. In re-survey of the same population after few years, a four-fold increase in the prevalence was documented. This is also the case in Pakistan although no serial assessment of prevalence has been done.¹ GORD symptoms are common in the urban population of Pakistan. The precipitating factors included are all known factors such as diet and postural changes, similar to what is reported in the Western population. Majority of patients do not seek medical advice and those who do only few undergo further investigations.² Alarming facts reported in a recent study where factors predisposing to oesophageal carcinoma. Heartburn and regurgitation were the presenting symptom in 18% and 14%, respectively, suggesting that there is some risk of missing a cancer while treating these patients

empirically without appropriate investigations.³

Efficacy of Proton pump inhibitors was assessed by Jafri et al. with Omeprazole 20 mg once daily for short-term treatment of reflux oesophagitis in an open labeled, non-comparative single centre study in patients with endoscopic findings of reflux oesophagitis (grade I-III).⁴ The study demonstrated that 67% of the patients became asymptomatic while another 30 % improved symptomatically. Similarly, the efficacy of high dosage of H-2 receptor blockers in the healing of reflux esophagitis in endoscopically proven cases with moderate to severe oesophagitis was determined by Ahmed et al.⁵

Self medication is very common and there is no safe policy of prescribing medicines in the country. Fortunately side-effects of PPIs are minor and reversible. Diarrhoea, headaches or flatulence may occur in up to 4% of cases and all side-effects occur within the first year. There are no long-term side-effects and there have been no deaths attributed to PPIs. Patients who suffer with symptoms of GORD self-medicate themselves with antacids, histamine-2 receptor blockers and proton pump inhibitors (PPIs) without consulting a physician. These medications were erratically bought for use from drug stores, where they are available over the counter throughout the country.

There is growing concern regarding the potential link between potent hypochlorhydria and the increase in incidence of gastro-oesophageal malignancy.⁶ 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.⁷ Oesophageal pH studies demonstrate that patients on PPIs still suffer from transient drops in lower oesophageal pH. The suggestion that intermittent exposure of oesophageal mucosa to either low pH or even duodenal reflux is an aetiological factor in the development of cancer, has led to the hypothesis that anti-reflux surgery may have a role in cancer prevention. However, in 20 years' experience, no gastric malignancy has been attributable to

PPIs. No clinically relevant changes have been observed in gastric histology.⁸

Severe oesophagitis is a complication of GORD. Long-standing oesophagitis tends to heal with circumferential scarring, causing an oesophageal stricture just above the gastrooesophageal junction. The widespread use of proton pump inhibitors appears to have reduced the incidence of oesophageal stricture, particularly those referred to surgeons. Superimposed pill-induced injury in addition to a reflux stricture causes a severe stricture that is difficult to dilate. Shortening of oesophagus is a controversial complication of longstanding reflux which may pose difficulty for the surgical correction and may predispose to post operative complications like slipped wrap. A precancerous condition i.e. Barrette's metaplasia is a well recognised sequel of long-standing GORD. The long standing reflux may cause progressive pulmonary damage and cases have been reported where patient becomes a candidate for lung transplantation and requires pretransplant fundoplication. There is a scarcity of statistics available to ascertain the magnitude of problems associated with complications of GORD in Pakistan.

Substantial and dramatic relief of heartburn with the use of PPI is an excellent indication for surgery. Patients who do not respond to PPI should be considered very carefully before contemplating surgery. GORD at younger age and defective lower oesophageal sphincter which is usually associated with a large hiatus hernia resulting in volume regurgitation and reflux in supine position are other reasons apart from complications as mentioned above, to offer surgical intervention.

Other indications of ant reflux surgery are poor quality of life with long standing GORD and need of long term PPI. Cost of life long use of medication is also a consideration in favour of surgical intervention in some part of the world. The Society of American Gastro-Enterological Surgeons (SAGES) recommended indications for anti-reflux surgery. These are: (i) failed medical therapy; (ii) complicated GORD (strictures, Barrett's); (iii) atypical symptoms, with GORD documented on 24-h pH monitoring; and (iv) option due to lifestyle considerations.⁹

Literature search for the experience of anti reflux surgery in Pakistan did not show any significant study in any peer reviewed journal. The question is whether there are not enough patients who require this type of surgery or there is not enough awareness among the patients and health care providers. Quest is whether issue of quality of life (QOL) is different in developing countries and parameters are not the same as in West and hence may require some modification of instrument use to asses the quality of life in patients suffering with symptoms of GORD. A significant

improvement in QOL has been observed after laparoscopic anti reflux surgery when compared to medical therapy, irrespective of the available QOL tool used.^{10,11}

The increasing cost of medications in developing countries would be an expensive proposition to keep a young bread earner of the family on long term medical maintenance therapy. The possibility is that patients would either suffer with the symptoms or end up developing a serious complication. The other options would be to seek a less expensive therapy which may be an alternative medical therapy including consulting with hakims and homeopathic experts. There is no evidence in the literature to prove that these therapies are curative or cost effective.

A cost-analysis of initial medical or open surgical therapy for complicated or chronic GORD has found that in selected patients surgery is clinically more advantageous and cost-effective than Omeprazole.

Thus there remains a certain population who would require anti reflux procedure. The question arises what type of procedure is evidence based. Certain endoscopic procedures have been introduced recently and long term results are not available as yet. Ant reflux surgery has a well-established place in the armamentarium for GORD treatment. The goal of the surgical approach is resolution of the GORD symptoms with as few side effects as possible and no further need for medical treatment. Since initial reports on the laparoscopic approach for Nissen fundoplication in 1991, it has been widely acceptable procedure in the surgical community all over the world. Advantages of Laparoscopic approach over open procedure include less surgical trauma, reduce pain, shorter hospital stay and sick leave and cosmetically more acceptable scars. After open operations there are statistically more complaints about scars. The commonly reported side effects of funduplications are dysphagia, inability to belch, gas bloating, abdominal distension and flatulence.

The surgeons require appropriate training and there is a learning curve. Serious complication and mortality has also been reported. Mortality and serious morbidity can not be easily accepted for a benign procedure and especially when it has been performed to improve the quality of life. Hence, training is essential. There is a lack of training facilities like laparoscopic surgical skill laboratory in the country to train junior doctors. Surgical simulators are commonly used in these laboratories and training centres. The development of "Wet Lab", where live anaesthetised animals can be used to develop laparoscopic surgical skills would be an expensive proposition. However, ethical issues like animal rights and safety and insurance would be relatively easy to circumvent in developing countries.

In past physicians have been reluctant to refer

patients for open anti reflux surgery perceiving it to be a major undertaking associated with significant morbidity. Most studies examining the longevity of anti-reflux surgery are from the open era. However, recent long-term excellent results of ten years follow up of laparoscopic fundoplication have revolutionized the treatment of GORD in West.¹² Good selection of patient with sound and adequate pre operative assessment is mandatory. This operation has been accepted as the optimal surgical option for the management of selected cases of gastro-oesophageal reflux disease. This is a safe and cost effective procedure in well trained hands and an easily reproducible operation. More surgeons could be trained to perform this operation, which would improve the quality-of-life of patients as well as decrease the cost of long-term medications.

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