Gastroesophageal reflux therapy: What is the role of surgery?

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M ANVARI. Gastroesophageal reflux therapy: What is the role of surgery? *Can J Gastroenterol* 1993;7(8):602-604. There are several therapeutic options available to control the symptoms associated with gastroesophageal reflux disease (GERD). The majority of patients are adequately maintained by conservative measures or medical therapy. Surgery traditionally has been reserved for patients resistant to maximum medical therapy or patients with recurrent aspirations. Many patients who require long term medication would also respond well to antireflux surgery, but the postoperative pain, morbidity and mortality associated with open surgery has tended to sway most in favour of the medical option. However, recent adoption of laparoscopic techniques in performance of anti-reflux surgery may change this preference. Early reports from the few centres engaged in assessment of laparoscopic fundoplication suggest that this new procedure is associated with significantly shorter hospital stay, quicker recovery, and reduced morbidity and mortality compared with conventional open fundoplication. This has led to a surge of enthusiasm among patients and physicians who see this procedure as a serious alternative to long term medical therapy. There is, however, no report of the long term efficacy of this procedure available. It is therefore vital that until such reports become available, performance of this new procedure be limited to centres that are able to investigate and follow the patients closely after surgery. There is no doubt that if the long term results of laparoscopic fundoplication proves to be similar to open surgery, it will become an important option in treatment of patients with GERD.

Key Words: *Fundoplication, Gastroesophageal reflux disease, Laparoscopic*

Traitement du reflux gastro-oesophagien : quel est le rôle de la chirurgie?

RÉSUMÉ : Plusieurs options thérapeutiques visent à maîtriser les symptômes associés au reflux gastro-oesophagien. La majorité des patients sont adéquatement contrôlés par des mesures conservatrices ou par un traitement médicamenteux. La chirurgie a jusqu'à présent été réservée aux patients réfractaires à la thérapie médicamenteuse maximum ou aux patients qui présentent des aspirations à répétitions. Plusieurs patients qui requièrent une médication à long terme répondraient bien également à la chirurgie anti-reflux, mais la douleur

GASTROESOPHAGEAL REFLUX DISEASE (GERD) is a common disorder affecting a significant portion of the population. In a survey of 335 persons, 7% experienced heartburn daily, while 29% had at least one episode of heartburn per month (1). The incidence of GERD is even higher among certain groups, in particular, pregnant mothers, hospital in-patients and patients with chronic respiratory disorders (2,3).

Current therapy for symptomatic patients includes changes in lifestyle and use of antacids initially, then short courses of an H₂-blocker and/or a prokinetic drug (4). More resistant cases are treated with omeprazole, which is almost always successful in treating reflux esophagitis (4,5) and relieving the symptoms of GERD, in particular, heartburn. There are, however, questions regarding the safety and consequences of long term maintenance therapy with omeprazole (4). Thus, the dilemma facing physicians is whether to use omeprazole, with unknown long term consequences but excellent symptom control, or use an H₂ antagonist and/or a prokinetic drug, with better long term safety record but less effective symptom control.

Surgery, in most instances, has been reserved for patients with recurrent aspirations or patients unresponsive to all forms of medical therapy, including omeprazole (6), despite the experience that patients who respond to omepra-

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post-opératoire, les taux de morbidité et de mortalité associés à la chirurgie ouverte, font en général pencher la balance en faveur de l'option médicamenteuse. L'adoption récente de techniques laparoscopiques dans la chirurgie antireflux pourrait cependant changer cette façon de penser. Selon les rapports obtenus des quelques centres qui pratiquent la fundoplication laparoscopique, cette nouvelle technique est associée à un abrègement significatif du séjour hospitalier, à une récupération plus rapide et à des taux de morbidité et de mortalité moindres en comparaison avec la fundoplication chirurgicale classique. Cela a soulevé l'enthousiasme des patients et des médecins qui voient dans cette technique une solution de rechange tout à fait envisageable au traitement médicamenteux à long terme. On ne dispose toutefois d'aucun résultat sur son efficacité à long terme. Il est donc important que, jusqu'à ce que de tels rapports soient publiés, l'exécution de cette technique se limite à des centres qui peuvent procéder à des mesures diagnostiques et suivre les patients attentivement après la chirurgie. Il est fort probable que les résultats à long terme de la fundoplication laparoscopique soient semblables à ceux de la chirurgie. Elle est appelée à devenir une option thérapeutique importante chez les patients atteints de reflux gastro-oesophagien.

zole also do well with fundoplication. The high morbidity and poor long term results reported with the use of certain types of antireflux procedures has led some physicians to discount surgery as an option in treatment of GERD. Many of these reports, however, represent the initial experience with a new procedure and are at odds with the excellent long term results obtained by surgeons with a special interest in GERD (using well established antireflux techniques) (7-9). Unfortunately, there are only two randomized controlled studies of surgical versus medical therapy in reflux disease (10,11). In both cases, surgery was superior to maintenance medical therapy; however, both studies were performed in the pre-omeprazole era, and it can be argued that the result may have been different if omeprazole was used. Despite this, it is clear from the literature that antireflux surgery, when performed on adequately investigated and properly selected patients, can provide excellent long term relief from symptoms of GERD.

It has been our experience that patients who respond to omeprazole or other forms of medical therapy also do well after antireflux surgery. One factor that has prevented patients on long term medical therapy from considering surgery seriously is pain/discomfort associated with operations that are performed either through the chest or, more commonly, through the abdomen. Recent development of laparo-

scopic techniques for antireflux surgery may, however, change all this. The new technique involves only five small stab incisions to allow the placement of trocars through which the surgeon, by the aid of special instruments and under direct vision, is able to mobilize the distal esophagus, pull the fundus of the stomach behind the esophagus and use three or four sutures to fashion the fundoplication. Most surgeons use a standard 360° degree Nissen fundoplication laparoscopically which is also the operation of choice by the majority of surgeons performing open antireflux surgery. Wrapping the fundus around the distal esophagus provides a high pressure zone in the region of the lower esophageal sphincter. It also creates an angle at the gastroesophageal junction, and ensures that at least 3 to 5 cm of esophagus lie within the abdominal cavity and is subject to rises in abdominal pressure which keep the lumen closed. Furthermore, vagal reflexes ensure fundal relaxation during swallowing and diminish the high pressure zone at the lower esophagus during passage of a bolus.

The laparoscopic technique differs very little from the open technique, with the exception that it overcomes the need for a large incision. The limited numbers of early reports (12-15) indicate that laparoscopic fundoplication is safe, and is associated with shorter hospital stay, less postoperative pain and a faster recovery than conven-

tional surgery. Patients are generally discharged home on the second post-operative day and are usually able to return to full activity within a week after surgery. This has led to a change in the image of surgery among patients who are considering surgery as a realistic and attractive alternative to lifetime medical maintenance therapy.

Due to its recent development, no long term reports on the efficacy of laparoscopic fundoplication are yet available. It will be another two years before five-year results from the few centres involved in assessment of this procedure become available. Until then, it is vital that this procedure is carried out under controlled environment, with close postoperative patient follow-up and evaluation.

Laparoscopic fundoplication is a new and exciting means of dealing with a common problem. Its role needs to be carefully evaluated. The relative safety and diminished postoperative discomfort make it ethically plausible for randomized controlled trials of laparoscopic fundoplication versus maintenance medical therapy. Such studies will make it possible to assess accurately the future role of surgery in treatment of this common disorder.

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