

LETTERS TO THE EDITOR

Surgery for uncomplicated gastro-oesophageal reflux

EDITOR.—The leading article by Mr Dehn on surgery for uncomplicated gastro-oesophageal reflux (*Gut* 1992; 33: 293–4) is particularly timely in view of the increasing availability of omeprazole and the continued efforts on several fronts to improve the results and reduce the invasiveness and incidence of side effects following antireflux surgery.

While omeprazole is undoubtedly the most effective agent currently available for the management of gastro-oesophageal reflux, its greatest efficacy is in Savary and Miller grades 1 and 2 oesophagitis. Most patients coming to surgical treatment have grade 3 oesophagitis, in which group the healing rate on omeprazole treatment is 67%.¹ Furthermore, recurrence of endoscopic oesophagitis after one year's continuous omeprazole treatment is up to 33%,² and even assuming a uniform relapse rate between grade 3 and grades 1 and 2 oesophagitis, this means that more than 50% of patients with grade 3 oesophagitis will remain unhealed on continuous omeprazole treatment.

We recently presented to the International Society for Disease of the Oesophagus a comparison between patients referred for anti-reflux surgery in the pre and post-omeprazole era. There has been little change in the overall numbers of patients being referred, although patients in the post-omeprazole era tend to be younger, have a higher incidence of mechanical defects such as lower oesophageal sphincter failure or severe impairment of 'pump' function, a more severe grade of oesophagitis, and a higher proportion of patients with an alkaline or neutral refluxate, which omeprazole is unlikely to influence. Interestingly, 35% of patients referred were concerned about the possible long term effects of continuous omeprazole treatment (as were their referring gastroenterologists) and many younger patients who were able to experience how comfortable life could be on omeprazole preferred to opt for an anti-reflux procedure and a surgeon with a good track record rather than a lifetime of continuous medication. Furthermore, there are considerable cost benefits in favour of surgery if omeprazole treatment is continued beyond five years, even allowing for treatment of the small proportion of failures after anti-reflux surgery.

As Dehn indicates, much attention has been directed in recent years towards improving efficacy and reducing side effects of anti-reflux surgery, fuelled by greater understanding of the pathophysiology of gastro-oesophageal reflux and the mode of action of anti-reflux procedures. While the floppy Nissen fundoplication is undoubtedly an effective anti-reflux procedure, it is, in the generality of its use, accompanied by a significant incidence of mechanical complications including gas bloat syndrome, inability to belch and vomit, and troublesome dysphagia, felt to be because of the production of a supra-competent lower oesophageal sphincter which relaxes imperfectly on swallowing.^{3,4} The best and most recent study by an advocate of the floppy

Nissen procedure, with symptomatic assessment of 145 patients by an independent gastroenterologist showed an overall incidence of troublesome mechanical complications of 28%.⁵

For these reasons, we have been evaluating over the past 15 years a procedure designed to be more physiological than floppy Nissen fundoplication, which by adopting a multifactorial view of competence enables the avoidance of a supra-competent lower oesophageal sphincter and preserves its ability to relax on swallowing. We have recently reported a clinical and objective study incorporating manometry, pH monitoring, endoscopy, and symptom scoring by a non-surgical observer.⁶ Symptomatic assessment showed 92% of patients were Visick 1 and 11, healing of endoscopic oesophagitis occurred in 86%, and restoration to physiological pH profile in 84%. There was no incidence of gas bloat or inability to belch or vomit, although 11% had transient dysphagia and in 2% this was troublesome. Follow up of 497 patients extends up to 15 years, during which time there was one hospital death (0.2%) because of a myocardial infarction 23 days following surgery, and a necessity for revisional anti-reflux surgery in 3.8%. There was no evidence of concomitant splenectomy. Similar results were presented by Munro and colleagues at the recent meeting of the Association of Surgeons of Great Britain and Ireland⁷ using this technique.

Undoubtedly, the next step in the evolution of anti-reflux surgery will be its performance through the laparoscope, which we and others have commenced. It is essential, however, that procedures having a functional as opposed to an anatomical end point are subjected to careful objective evaluation, and preferably preceded by animal studies. Perhaps the randomised controlled studies which Dehn espouses should be between omeprazole and laparoscopic anti-reflux surgery once this has been fully evaluated. It would be unfortunate if the potential for this technique and these controlled studies were jeopardised by the hasty introduction of laparoscopic anti-reflux surgery without full objective evaluation, with the inherent risk of bringing a promising technique into disrepute.

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Reply

EDITOR.—Professor Watson's letter concentrates on three aspects of treatment of gastro-oesophageal reflux disease – the use of omeprazole, the side effects following floppy Nissen fundoplication, and the advent of laparoscopic anti-reflux surgery.

Professor Watson states that most patients undergoing anti-reflux surgery are found to have oesophagitis of Savary and Miller grade 3. I believe that in the 'post-omeprazole era' more patients undergoing surgery will be found to have lower grades of oesophagitis because of previous long term use of omeprazole treatment. In the preceding six months of the 12 patients on whom I have performed anti-reflux surgery, only three were of grade 3 oesophagitis and three were endoscopically negative refluxers. All patients had been given omeprazole and five were under 35 years of age. Although different surgeons seem to treat different populations of patients with reflux disease¹ the widespread use of omeprazole is likely to be reflected in the downgrading of endoscopic findings by comparison with the data obtained in the pre-omeprazole era.

The Large Bowel Cancer Study and West Midlands Oesophagectomy Study both established that the results following major intestinal surgery are largely surgeon dependant. This is borne out by the results reported by Professor Watson following the anti-reflux operation that bears his name² and by the results of Bancewicz³ and others who have employed the floppy Nissen fundoplication. In his letter Professor Watson criticises the second of these operations quoting several references. Bombeck and Donahue first reported the technique for floppy Nissen fundoplication in 1976 following its use in animals.⁴ The same authors reported the results in humans in 1985.⁵ Negre's paper⁶ reports on patients operated on between 1970 to 1979 when the wrap was constructed over an 18 French gauge naso-oesophageal tube: a considerably tighter wrap than that constructed in the floppy procedure (50 French gauge oesophageal bougie in addition to an 18 French gauge oesophageal tube).

Dr Meester's paper⁷ quoted by Professor Watson shows a reduction of persistent post-operative dysphagia from 24% to 4% by undertaking a shorter wrap and by increasing the size of the intra-oesophageal stent. The authors reported 93% patient satisfaction. Finally, Professor Watson quotes an abstract by Beauchamp *et al.*⁸ The assessment following floppy Nissen fundoplication was undertaken in only 50 of the 145 patients (not all 145) and there was an overall satisfaction rate of 82%. Severe changes in swallowing were reported in 0%. The abstract does not state how these 50 patients were selected. Recently, Walker *et al.*⁹ reported significant post-operative dysphagia in one of 26 patients following floppy Nissen fundoplication and gas bloat in three of 26 at the long term assessment.

Whatever anti-reflux operation is performed the most important factor is, as Professor Watson states, choosing a surgeon who specialises in the field and has a good record. Laparoscopic anti-reflux surgery is now being undertaken with enthusiasm. Initial reports appear encouraging.^{10,11} It is to be hoped that the results of this surgery will be audited by