Supplementary file 1

Detailed review of LARS studies

Mahon et al. 2005 (58)

This was an early PPI *vs* LARS RCT in which a total of 217 patients were randomized to optimal medical therapy with PPIs (108 patients) or to LNF (109 patients) with preoperative age, weight, and the severity of reflux symptoms similar in both groups. After 3 months, the LNF group reported mean DeMeester scores significantly lower than the PPI group (8.6 versus 17.7; P<0.001). Additionally, general well-being improved in both groups at 3 months and 1 year using Psychological General Well-Being Index and Gastrointestinal Symptom Rating Scale. PPI dose escalation occurred in 15 (13.9%) in the PPI group. In the LNF group, there 4 (3.7%) major intraoperative complications and 5 (4.6%) patients developed dysphagia that remained for more than 3 months after surgery.

LOTUS Trial, Galmiche et al. 2011 (26)

The LOTUS trial study compared the effects of esomeprazole *vs* LARS in 372 patients with chronic GERD. At 5 years, 85% patients in the LARS group remained in remission compared with 92% of patients in the medically treated group (P=0.25). An increased dose of PPI was required to control symptoms by 23% in the medical arm while the LARS group reported bloating and flatulence. Prevalence and severity of acid regurgitation and dysphagia showed greater improvement in the LARS than in the medical group (P<0.001).

SAEs were found in 28.6% of the LARS group and 24.1% of PPI group. Overall LARS and continuous PPI treatment were similarly effective and well-tolerated therapeutic strategies for providing effective control of GERD for 5 years.

References

1. Mahon D, Rhodes M, Decadt B et al. Randomized clinical trial of laparoscopic Nissen fundoplication compared with proton pump inhibitors for treatment of chronic gastro-oesophageal reflux. Br J Surg 2005;92:695-9.