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PERSISTENT DUAL HIGH PRESSURE ZONE, OESOPHAGEAL BODY HYPOMOTILITY AND ABNORMAL RESPONSE TO MULTIPLE RAPID SWALLOWS ARE ASSOCIATED WITH REFLUX SYMPTOMS AFTER FUNDOPLICATION

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Introduction Persistent reflux symptoms occur in a subgroup of patients following antireflux surgery. These symptoms can be due failure of the antireflux barrier. GI physiology studies are performed to evaluate the OGJ function and anatomy in these patients. Recent studies with high resolution manometry (HRM) have shown the presence of a dual high pressure zone (HPZ) at the OGJ as an expression of persistent hiatus hernia. However, the relation between dual high pressure zone, oesophageal hypomotility and persistent symptoms is unclear. The aim of this study was to evaluate reflux parameters and oesophageal motility patterns with HRM in a group of symptomatic patients after fundoplication.

Methods Ten patients (5 male, 5 female; mean age 55 years) were selected based on the presence of persistent typical reflux symptoms post-Nissen fundoplication. The patients underwent HRM and impedance-pH monitoring 'off' PPI. The existence of dual HPZ, oesophageal hypomotility and amplitude of the after-contraction post multiple rapid swallowing (MRS) were evaluated together with acid and non-acid reflux parameters. Increased number of reflux events (post Nissen) was considered if $>30/24$ h.¹

Results Six out of ten patients had a dual HPZ on HRM. Acid exposure time and number of acid reflux events in these patients was significantly higher than those with a single HPZ (12.7% vs 0.5%, $p=0.01$). The patients with a dual HPZ more commonly exhibited oesophageal hypomotility and poor response to MRS compared to the patients with a single HPZ (4/6 vs 1/4). In addition more of the patients with a dual HPZ showed impaired acid reflux clearance compared to patients with single HPZ (5/5 vs 1/3).

Conclusion HRM and impedance-pH measurement allows a precise assessment of patients with symptoms postfundoplication. Our study suggests that the presence of a dual HPZ on oesophageal HRM is associated with impairment of oesophageal motility and impaired oesophageal acid clearance, and hence may be important in the persistence of GORD symptoms postoperatively.

Competing interests None.

Keywords fundoplication, Gastro-oesophageal reflux disease (GERD), High resolution manometry, Impedance.

REFERENCE

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