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Editorial

Per-oral Endoscopic Myotomy for Achalasia: Lights and Shadows[☆]



Miotomía endoscópica por vía oral para el tratamiento de la acalasia: luces y sombras

Esophageal achalasia is a primary esophageal motility disorder characterized by the absence of esophageal peristalsis and inability of the lower esophageal sphincter (LES) to relax appropriately in response to swallowing. Although it is a rare disease with a reported incidence of 1 in 100,000 individuals, its prevalence seems to be increasing. This could be partially explained by a higher awareness of the disease and enhanced ability to establish the diagnosis through high resolution manometry.¹

The cause of achalasia is unknown, and treatment is directed towards the elimination of the outflow obstruction at the level of the gastroesophageal junction. Traditionally, this was accomplished by either pneumatic dilatation or laparoscopic Heller myotomy (LHM) with a partial fundoplication.² In 2010, Hinoue published the results of a new technique – the peroral endoscopic myotomy (POEM) – for the treatment of achalasia.³ Following this study, POEM was rapidly embraced worldwide by gastroenterologists and surgeons, and became the primary treatment modality for achalasia in many centers.

This endoscopic procedure is an attractive treatment modality for many reasons: lack of abdominal incisions, faster recovery than a laparoscopic operation, ease of performing a longer myotomy, avoidance of vagal nerve injury, and lack of intra-abdominal adhesions that might require future operations. POEM is also attractive because it has proven to be very effective in promoting esophageal emptying and resolving symptoms.⁴ For instance, significant improvements in Eckardt scores and LES pressures in a cohort of 500 patients were seen at 2 months, 1 year, and 3 years post-POEM.⁵ A meta-analysis including 36 studies with 2373 patients reported that clinical success (Eckardt score ≤ 3) was achieved in 98% of the patients after POEM.⁶ In addition, POEM seems to be more effective than other treatment modalities for patients with type III achalasia (“spastic

achalasia”), probably because it allows to perform a longer myotomy than LHM.^{7,8}

The main concern regarding POEM, which ablates the LES without adding any type of antireflux mechanism, is the risk of post procedural gastroesophageal reflux disease (GERD). Interestingly, the concern of performing an esophageal myotomy without fundoplication is not new. In 1992 Pellegrini and colleagues⁹ showed their experience with a thoracoscopic myotomy without fundoplication. The relief of dysphagia was excellent, but 60% of the patients developed post-operative GERD, as measured by pH monitoring. Almost 30 years later, history seems to repeat itself. Sharata and colleagues¹⁰ performed pH monitoring on 68 patients after POEM (mean follow-up 20 months), and found an incidence of abnormal acid exposure of 38%. In another study, post POEM upper endoscopy showed esophagitis in 55% of the patients, and 70% of the patients studied with pH monitoring had pathologic reflux.¹¹ A recent multicenter study analyzing 282 patients with objective testing for gastroesophageal reflux, reported a pathologic DeMeester score in 57.8% of the patients.¹² Finally, a meta-analysis that analyzed 53 studies reporting data on LHM (5834 patients) and 21 articles examining POEM (1958 patients) showed that patients undergoing POEM were more likely to develop GERD evidenced by pH monitoring (LHM 11.1% vs. POEM 47.5%, $P < .001$).¹³

Overall, POEM remains a very effective treatment modality for patients with achalasia. However, the high rate of post procedural GERD should be carefully considered, especially in young patients. Reflux is particularly concerning in this setting, because it occurs in an aperistaltic esophagus with very slow esophageal clearance. Therefore, the increased mucosal contact time carries a high risk of metaplasia.

We believe that POEM is an excellent option for patients with recurrent symptoms after LHM for many reasons: a re-do

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LHM is challenging and is associated with considerable surgical morbidity, these patients already have a fundoplication which could prevent GERD, and POEM can be safely performed in a virgin field (posterior wall of the esophagus). Given the current evidence, it is also reasonable to offer POEM as a primary therapy in patients with type III achalasia. For the rest of the patients, a LHM with partial fundoplication remains the gold standard and further studies are needed to elucidate the role of POEM.

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