Minimally invasive surgery for non-achalasia primary esophageal motility disorders is currently underused

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Abstract
Surgical treatment for non-achalasia primary esophageal motility disorders is reserved for few situations. Proper selection of patients brings good outcomes with low morbidity, which makes surgical therapy an adequate therapeutic option. High resolution manometry reclassifies esophageal motility disorders. Interestingly, literature is scarce on surgical therapy for this new classification with per oral endoscopic myotomy as the leading treatment.

Keywords: Esophageal manometry, motility disorders, distal esophageal spasm, jackhammer esophagus

High resolution manometry reclassifies esophageal motility disorders based on the Chicago 3.0 classification. Even though there is a certain correspondence between previous and current classifications, a distinct nomenclature arrived based on newly developed - and putatively more objective and accurate - parameters. Thus, primary esophageal motility disorders (PEMD) are probably better diagnosed and evaluated.

Achalasia is surely the most understood PEMD. Other PEMD are not as well comprehended nor have defined therapy options. These other diseases defined by specific manometric pictures may occur as PEMD or secondary to gastroesophageal reflux disease (GERD). If GERD is present, the motility abnormality is
considered secondary, and treatment is directed toward reflux. In the absence of GERD, therapy is aimed at the modulation of the esophageal dysmotility with pharmacological agents or at the permeabilization of the gastroesophageal junction with endoscopic or surgical procedures. 

Surgical treatment for non-achalasia PEMD was reserved for few situations during the conventional manometry era. Cardiomyotomy (Heller’s operation) and fundoplication are used for patients with hypertensive lower esophageal sphincter, diffuse esophageal spasm or nutcracker esophagus and obstructive symptoms. Proper selection of patients is linked to good outcomes with low morbidity, which makes surgical therapy an adequate therapeutic option. Interestingly, literature is scarce on surgical therapy for this new classification with per oral endoscopic myotomy (POEM) as the leading treatment.

Ineffective esophageal motility is not treated by surgery. Hypertensive lower esophageal sphincter is no longer a PEMD according to Chicago 3.0.

There are no studies on Heller’s myotomy for distal esophageal spasm (previously diffuse spasm) based on the new classification. Some case reports of POEM for distal spasm have been reported with multicenter studies encompassing a larger number of patients but always inferior to 20 in total. Experience with the method is too short to draw conclusions. The same is true for jackhammer esophagus: no studies on Heller’s myotomy and few case reports for POEM. A recent systematic review compiling these small series showed a clinical success of 90%.

Esophagogastric junction outflow obstruction is an altered motility pattern contemplated by Chicago 3.0 classification. Most cases are associated to mechanical obstruction especially after operations in the area. Few cases are considered PEMD. Interestingly, some cases treated by Heller’s myotomy showed good outcomes while POEM did not show good results.

In conclusion, Heller’s myotomy and fundoplication are currently underused for the treatment of non-achalasia PEMD. POEM is the preferred treatment, but long-term results with larger series are still elusive.

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