

New Minimally Invasive Endoscopic and Surgical Therapies for Gastroesophageal Reflux Disease (GERD)

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Abstract

GERD has become one of the most frequent pathology of the upper GI tract. It is a spectrum disease and is a progressive disease as well. Serious and severe complications are possible. The mainstream therapy in most of the patients is the medical therapy with PPI's. The most severe cases with an impaired LES (Lower Esophageal Sphincter) function as well as important anatomical disruptions are of surgical indication, the gold standard being laparoscopic fundoplication, an elective therapy with long term follow up outcomes at the expense of de novo symptoms associated with fundoplications in general. 30% to 40% of the patients are PPI refractory with partial symptom control, but they are not willing to go for the laparoscopic fundoplication because of the invasive character and because of potential postfundoplications syndromes. There is a "treatment gap" for these patients with GERD. For a well selected patient population with GERD, with mild forms of the disease, without complications and without major anatomical disruptions (patients with small hiatal hernias), patients who are refractory on PPI medication, there are today new alternative therapies, minimally invasive. These therapies are less aggressive and basically with no side effects or new onset symptoms that Laparoscopic Fundoplications will give. These are endoscopic therapies which improve the LES function: Stretta utilizes radiofrequency therapy, a novel technique describes mucosal resection at the level of the cardia, while a partial fundoplication from within the stomach can be realized with EsophyX, Muse or Gerd-X. Form all these procedures, EsophyX is the most advanced with more than 20,000 patients treated worldwide, with good clinical outcomes and with no de novo symptoms. The laparoscopic techniques treat hiatal hernias larger than 2 cm. Linx utilizes a magnetic ring at the LES level. EndoStim utilizes electrodes in order to stimulate the LES muscle. These procedures are effective on short term and there are few patients treated with Linx or EndoStim. More research for Linx and EndoStim is necessary with randomized clinical trials, with improvement of the devices and with long term follow up.

Key words: Gastro Esophageal Reflux Disease (GERD), Laparoscopic Fundoplication, EsophyX, Stretta, Muse, Gerd-X, Linx, EndoStim