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In Which Situation is Endoscopic Radiofrequency Anti-Reflux Therapy (Stretta) Effective for Controlling Gastroesophageal Reflux Symptoms?

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See “The Outcome of Endoscopic Radiofrequency Anti-Reflux Therapy (STRETTA) for Gastroesophageal Reflux Disease in Patients with Previous Gastric Surgery: A Prospective Cohort Study” by Edward John Nevins, James Edward Dixon, YKS Viswanath, on page 542-547.

Endoscopic radiofrequency anti-reflux therapy (Stretta) is a minimally invasive mechanical therapy for gastroesophageal reflux disease (GERD) and it targets the intrinsic components of the gastroesophageal junction (GEJ).¹ The components of GEJ are the lower esophageal sphincter (LES, intrinsic sphincter) and the surrounding structures, including the crural diaphragm, esophagophrenic ligaments, and connective tissues, which form the extrinsic sphincter.² Moderate heat, ranging from 80–90°C, denatures muscle fibers at the tip of the catheter, and enables injured muscle fibers to regenerate through the remodeling process. The remodeling process induces hypertrophic changes in the muscle fibers and results in the augmentation of barrier function. Stretta therapy increases LES pressure and decreases LES compliance, resulting in decreased reflux, which enhances the quality of life.³

Because the extrinsic barrier function of GEJ is lost in larger hiatal hernias measuring > 2 cm, the effect of Stretta would be limited in cases of hiatal hernia. The diagnosis of hiatal hernia

is crucial for the selection of appropriate candidates. If a hiatal hernia is found on high-resolution manometry, the patient will not be a candidate for Stretta. Diagnosing hiatal hernia on the basis of endoscopic findings is difficult since endoscopic features change consistently in the early phase. Hill classification for gastroesophageal flap valve (GEFV) can be used to evaluate the presence of angle of His.⁴ GEFV grade IV, i.e. blunting of angle of His, may be representative of hiatal hernia, even though hiatal hernia may not be apparent on endoscopy. Some patients show hernial sac formation only after burping of excessive air. This transient loss of GEFV could affect the efficacy of the Stretta treatment. The first indication of Stretta is refractory GERD without definite hiatal hernia or GEFV grade IV.

Stretta procedure can be applied for the management of GERD after upper gastrointestinal surgery, including anti-reflux surgery. Fundoplication restores the extrinsic barrier of GEJ; however, some patients continue to complain of reflux. Recurrent reflux symptoms after fundoplication may be amenable to Stretta, which strengthens the intrinsic sphincter.⁵ In this issue of Clinical endoscopy, Nevin et al. reported that reflux symptoms of almost all the patients (6/7) improved after Stretta.⁶ Stretta was also effective for the patients who had undergone other surgeries such as fundal gastrointestinal stromal tumor resection and vagotomy with pyloroplasty. Because these surgeries do not affect the GEJ anatomy, GERD symptoms were successfully controlled with Stretta. However, Stretta could not improve reflux symptoms in cases of revision

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surgery after a failed esophyx procedure. Roux-en-Y gastric bypass surgery may also affect the efficacy of Stretta procedure.⁷ In summary, Stretta was effective in patients with fundoplication who had not undergone surgery targeting the GEJ.

Stretta cannot augment the extrinsic barrier of GEJ; therefore, the presence of hiatal hernia is a key factor affecting the efficacy of this procedure. Fundoplication and other surgeries that do not target the GEJ may not worsen the function of GEJ, and Stretta can be chosen to control reflux symptoms occurring after these surgeries. In case of reflux symptoms after sleeve gastrectomy, Stretta can also be a good modality for symptom control.⁸ Therefore, the second indication of Stretta is post-fundoplication GERD and GERD after sleeve gastrectomy.

Stretta can also be used as a bridging modality for controlling GERD before anti-reflux surgery is performed. Among several anti-reflux endoscopic treatments, Stretta is the only procedure that does not injure the surrounding structures of GEJ. Transoral incisionless fundoplication (TIF) targets the full thickness of GEJ; therefore, the surrounding structures may be injured and inflamed by the procedure. Revision surgery after TIF may affect the GEJ anatomy and worsen reflux symptoms despite successful surgery. Therefore, Stretta can act as a bridging therapy for controlling reflux symptoms before fundoplication, and this is the third indication of Stretta.

This report analyzed the effect of Stretta in postoperative cases. To predict the efficacy of Stretta, I recommend measuring the compliance of GEJ using Endo-Flip before and after the Stretta procedure.⁹

Conflicts of Interest

The author has no potential conflicts of interest.

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