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Abstract

TITLE: COMPARISON BETWEEN ESOPHYX AND MUSE SYSTEMS FOR TRANSORAL INCISIONLESS FUNDOPLICATION (TIF) FOR THE TREATMENT OF GASTROESOPHAGEAL REFLUX DISEASE (GERD): 6 AND 12-MONTH RESULTS FROM A SINGLE-CENTER RETROSPECTIVE STUDY

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ABSTRACT BODY:

Abstract Body : BACKGROUND AND AIMS: TIF can be performed using Esophyx2.0 (EndoGastric Solutions) or MUSE (Medigus Ultrasonic Surgical Endostapler). Esophyx creates a 270° circumferential valve by deploying polypropylene fasteners under endoscopic vision. MUSE uses a surgical endostapler to place metal stitches under an ultrasound-guide and creates a fundoplication similar to Dor-Thal. Aim of this study was to retrospectively compare clinical, pathophysiological and endoscopic results at 6 and 12 months after TIF with the two systems.

MATERIALS&METHODS: The results were compared in terms of GERD-HRQL score, PPI use, DeMeester score, total number of refluxes detected by esophageal impedance and esophagitis rate. Data were compared by Chi-squared test. **RESULTS:** We performed 49 TIF with Esophyx from 2007 to 2012 and 28 with MUSE from 2015 to 2017. We had 2 pneumothorax with Esophyx and 1 esophageal perforation with MUSE (complication rate: 2% vs 3.5%). 1/28 pts (3.6%) after MUSE and 4/49 (8.2%) after Esophyx requested surgery for inefficacy on symptoms. All patients (pts) undergone Esophyx had completed follow-up. Among pts underwent MUSE, 21 and 14 completed clinical follow-up; 12 and 7 completed pathophysiological follow-up; 18 and 11 completed endoscopic follow-up, at 6 and 12-month respectively. At 6-month follow-up in the Esophyx group 61% of pts stopped PPI and 22% halved PPI, while in the MUSE group 67% of pts stopped PPI and 22% halved PPI. At 12-month follow-up in the Esophyx group 51% of pts stopped PPI and 29% halved PPI, while in the MUSE group 64% of pts stopped PPI and 29% halved PPI. In the Esophyx group GERD-HRQL score was 46±19 pre TIF, 15±13 at 6-month and 16±13 at 12-month; while in the MUSE group was 39±16 pre TIF, 16±14 at 6-month and 13±11 at 12-month. In the Esophyx group DeMeester score was 22±12 pre TIF, 18±15 at 6-month and 19±20 at 12-month; while in the MUSE group was 23.6±18.9 pre TIF, 29±24 at 6-month and 24±18 at 12-month. In the Esophyx group the number of total refluxes was 66±40 pre TIF, 38±37 at 6-month and 43±35 at 12-month; while in the MUSE group was 58±37 pre TIF, 38±31 at 6-month and 30±23 at 12 month. In the Esophyx group the number of esophagitis was 11 (22%) pre TIF and 6 (12%) at 6 and 12-month, while in the MUSE group was 8/28 pts (29%) pre TIF, 6/18 pts (33%) at 6-month and 2/11 pts (18%) at 12-month.

CONCLUSIONS: At 6 and 12-month follow-up, there are no statistically significant difference in clinical, pathophysiological and endoscopic results between TIF with Esophyx and MUSE systems.

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DISCLOSURE

The following authors have completed their 2018 DDW disclosure: Pier Alberto Testoni: Disclosure completed | Giorgia Mazzoleni: Disclosure completed | Giovanni Distefano: Disclosure completed | Sabrina Testoni: Disclosure completed | Lorella Fanti: Disclosure completed | Mario Antonelli: Disclosure completed | Sandro Passaretti: Disclosure completed