CONCOMITANT TRANSORAL INCISIONLESS FUNDOPLICATION OUTCOMES AND EFFICACY FOR GASTROESOPHAGEAL REFLUX DISEASE: A RETROSPECTIVE ANALYSIS

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BACKGROUND

GERD affects up to 27.8% of the American population and costs USD 10 billion dollars to the US healthcare yearly. Proton pump inhibitors (PPI) remain the gold standard treatment despite long-term complications and being refractory in up to 40% of patients since it does not address anatomical defects present in many of them. Alternatives such as hiatal hernia repair (HHR) with concomitant transoral incisionless fundoplication (cTIF) have been used to address patients with larger hernias (>2 cm) or esophagitis grade B-D, but there is scarce literature about its efficacy. We aim to assess the outcomes and efficacy of cTIF.

METHODS

Retrospective data were collected from patients who underwent hybrid TIF in two centers from May 2012 to March 2021. Categorical variables were described as frequencies. Statistical analysis was performed using chi-square or fisher's exact tests to assess the relationships between different variables. P-value of < 0.05 was considered statistically significant.

RESULTS

Demographics can be found on Table 1. 54 patients (16.16%) had recurrence of at least one symptom after cTIF. Patients showed significant improvement in overall symptoms relief, including difficulty sleeping, chest or epigastric pain, cough, hoarseness, and bloating ($p < 0.000$) Dysphagia was not improved ($p=0.061$) (Figures 1 and 2). 282 patients were on daily PPI before the procedure, with a mean use time of 5.6 years (± 5.3). We found a significant PPI use reduction, from 92.45% to 44.75% of patients ($p < 0.000$) (Figure 2). No difference was found when comparing symptoms resolution and Hill grade, hiatal hernia size, presence of esophagitis, and prior daily PPI use (Figure 3). No adverse events were reported. 8 patients (2.39%) had recurring GERD with a positive DeMeester score and underwent a second cTIF.

CONCLUSION

GERD is associated with decreased quality of life, especially for patients with refractory and severe symptoms. Hybrid TIF presents as a solid alternative for patients with GERD with hiatal hernia, with most patients showing significant improvements in symptoms. This is the largest cohort of patients who underwent cTIF performed by the same surgeon to the best of our knowledge. Further studies should aim to establish the long-term outcomes of the procedure.

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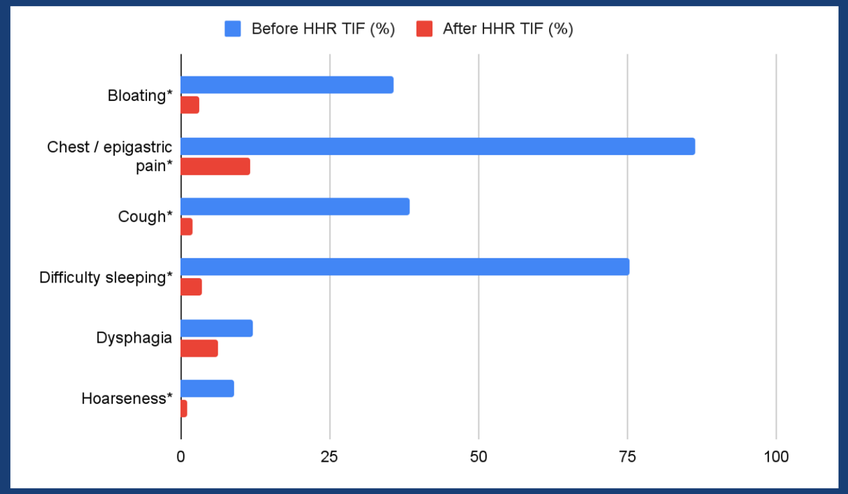

Figure 1. Percentage of patients that had GERD-related symptoms before and after undergoing cTIF (HHR TIF). Symptoms marked with an asterisk were found statistically significant ($p < 0.000$).

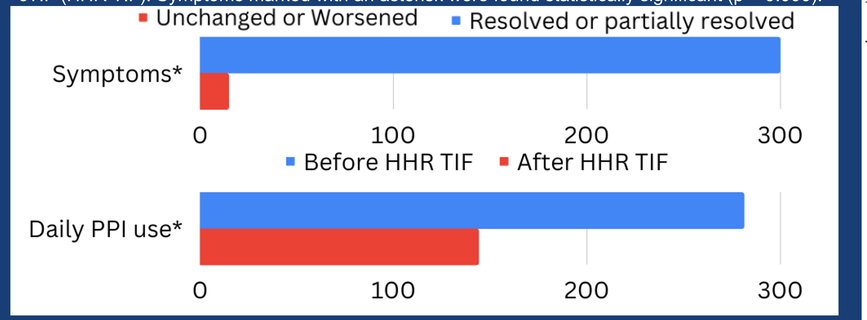

Figure 2. 302 patients reported completely resolved or partially resolved symptoms. 14 patients had unchanged results and 1 patient had aggravated results. ($p < 0.000$).There was a significant reduction in the use of daily PPIs comparing before and after surgery.($p < 0.000$).

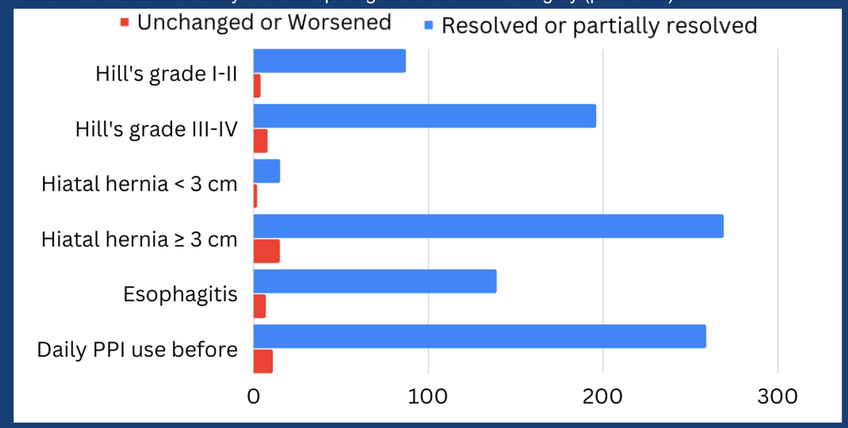

Figure 3. No difference was found between Hill grade, hernia size, esophagitis and prior use of daily PPI and symptoms outcome.

HHR cTIF has shown to lead to symptom relief and decrease in daily use of PPI.

Table 1. Demographics

No. Patients	334
Male/Female	132/202
Age (SD) (years)	54 (± 14.7)
Mean BMI (SD) (Kg/ m^2)	28.4 (± 5.3)
Mean hiatal hernia size (SD) (cm)	3.7cm (± 1.25)
Means DeMeester (SD)	38.9 (±35.2)
Mean use of daily PPI (SD) (years)	5.6 (± 5.3)
Symptoms before HHR cTIF (%)	
Bloating	73 (21.8%)
Chest / epigastric pain	270 (80.8%)
Cough	91 (27.2%)
Difficulty sleeping	262 (78.4%)
Dysphagia	27 (8.8%)
Hoarseness	21 (6.2)
Symptoms after HHR cTIF (%)	
Bloating	7 (3.5%)
Chest / Epigastric pain	25 (12.6%)
Cough	4 (2%)
Difficulty sleeping	8 (4%)
Dysphagia	14 (7%)
Hoarseness	2 (1%)
Symptoms resolved or partially resolved (%)	303 (90.7%)
Symptoms unchanged or aggravated (%)	15 (4.5%)
Adverse events	0 (0%)
Recurrent symptoms (%) with positive DeMeester	8 (2.39%)
Mean follow-up time (days)	274 (±380)