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ENDOSCOPIC ANTIREFLUX THERAPY FOR REFRACTORY GERD: A SYSTEMATIC REVIEW AND META ANALYSIS

Society: ASGE

Track: Esophageal Diseases

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Introduction

Gastroesophageal Reflux Disease (GERD) is highly prevalent and significantly impacts the quality of life. Conventionally, it is treated using Proton Pump Inhibitors (PPI), yet 30% patients are non responsive to PPI therapy. Anti Reflux Mucosectomy (ARMS) and Anti Reflux Mucosal Ablation (ARMA) are novel endoscopic procedures where gastric mucosa is excised or ablated semi circumferentially around the gastroesophageal junction which upon healing, causes retraction, tightening and restortion of angle Hiss. ARMS and ARMA improve quality of life in pateints with GERD and enable discontinuation of PPI therapy. We aim to evaluate the safety and feasibilty of these techniques for PPI dependent GERD.

Methods

A systematic search was conducted in PubMed,Google Scholar and Scopus.A boolean expression was constructed to search the databases, about 597 studies were retrieved out of which studies reporting pre- and post procedure subjective and objective outcomes were included.The statistical analysis was conducted in R-Studio. The outcomes analysed were the change in mean GERDQ score, Demeester Score, Acid exposure time and the proportion of the population who discontinued PPI post-procedure. The data was analysed using the Meta, Metadata and the Metafor packages of R studio. The studies were subgrouped based on the Intervention ie ARMA or ARMS. The change in Mean difference was evaluated using the Inverse variance method. The proportion of the population discontinuing PPI was assessed using the Random intercept logistic regression model. The heterogeneity of the studies was evaluated by the I^2 Test.

Results

The study conducted involves 11 studies with a total of 401 subjects in whom the intervention was either ARMA or ARMS. The results indicated a significant decrease in GERD-Q SCORE (-6.73 ; 95% CI ; p = 0), Demeester score (-37.4 ; 95% CI ; p<0.05) and Acid exposure time (-6.27 ; 95% CI ; p<0.05) post the completion of the procedure. The proportion of population who discontinued PPI was 0.45(95% CI ; p<0.01).

Conclusion

Endoscopic Antireflux Therapies like ARMA and ARMS are highly effective in the management of refractory GERD. Patients who underwent these procedures showed a substantial decrease in GERD Questionnare scores which assess the symptoms and severity of GERD. It was also associated with lower Demeester Scores used to quantify the severity of acid reflux. Mean Acid Exposure time which measures the duration of time where the pH of esophagus lies below 4, was considerably lowered post the procedure. Additionally, approximately half the patients who underwent the procedure accomplished discontinuation of PPIs. In essence, endoscopic procedures for management of refractory GERD have higher clinical success with minimal adverse events.

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Ananya Prasad

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