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Journal Article Summary

The article is a retrospective cohort study that investigates how the size of a hiatal hernia relates to the severity of GERD. The parameters used in this study were the DeMeester score, symptom correlation indices (SI), and Symptom Association probability (SAP). In addition to hernia size, the researchers also study how other factors – age, smoking, alcohol consumption, BMI, esophagitis and dysmotility – affected these same reflux outcomes.

The study took place in North Manchester, England. It included a total of 115 patients aged 18 and older who underwent laparoscopic fundoplication for GERD between January 2017 to June 2023. The size of the hiatal hernia was determined by upper endoscopy. The parameters were measured and calculated with 24-hour pH monitoring.

Some pertinent key findings were that hiatal hernia larger than 2 cm had a significant association with pathological reflux (Barghash et al., 2025). However, hernia size was not significantly associated with elevated DeMeester scores, SI or SAP. In other words, while a large hernia size points to the possible existence of GERD, it does not accurately predict how severe the reflux is or how the patient symptoms definitively came to be. A person might have a small hernia but very high acid exposure and severe symptoms. Additionally, other factors like age or smoking might play a role in how much acid flows back and might not be due to GERD. In fact, older age was significantly associated with higher DeMeester score, SAP score and hernia size above 2 cm. This suggest that age is a significant risk factor for more severe reflux. Other factors such as BMI, gender and alcohol intake did not show significant association in the study cohort.

My patient is a 55 y/o female with a PMHx for HLD, IDA, morbid obesity, and prior partial gastrectomy who presented with persistent GERD symptoms despite multiple prior evaluations. Imaging later demonstrated a moderate-sized hiatal hernia measuring around 4-5 cm with associated esophageal reflux. According to the study, individuals around age 55 represent the peak age group for hiatal hernia related GERD, which matches with this patient's presentation.

Her prior partial gastrectomy may have also contributed to the development of the hernia by altering the diaphragm or weakening the hiatal area. The large size of the hernia in this patient is statistically associated with increase reflux severity based on the study findings. Although morbid obesity is commonly considered a risk factor for GERD, the study noted that BMI was not significantly associated with reflux parameters. This suggest that for this patient, her age, presence and size of the hernia are likely the primary contributors to her worsening symptoms rather than BMI alone.

Reference:

Barghash, M., Obayi, E., Itaman, U., Furber, Z., Caul, A., Othman, A., & Mansour, M. (2025). Hiatal Hernia Size and Reflux Parameters in Gastro-Oesophageal Reflux Disease: Evidence From a Retrospective Cohort. *Cureus*, *17*(11), e98131. https://doi.org/10.7759/cureus.98131