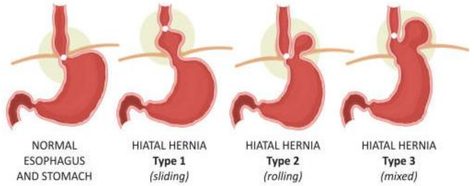
Hiatal Hernia Repair Significantly Decreases Pulmonary Health Impairment: Prospective Assessment Using a Standardized Questionnaire

Noah Wilson, BS[1]; Alexander Hall, MS[2]; Venketraman Sahasranaman, MD[3]; Matthew Reilly, MD[4]; Kalyana Nandipati, MBBS[4,5]

[1]Creighton University School of Medicine, Omaha, NE; [2]Department of Clinical Research and Public Health, Creighton University School of Medicine, Omaha, NE; [3]Department of Pulmonary and Critical Care, Creighton University School of Medicine, Omaha, NE; [4]Department of Surgery, Creighton University School of Medicine, Omaha, NE; [5]Department of Surgery, Wake Forest School of Medicine, Charlotte, NC

BACKGROUND

- Hiatal hernias are a common condition in the population over the age of 50 in the United States with a prevalence of 60%.
- These hernias can be categorized into four types based on the intrathoracic contents.



- Surgical intervention is indicated if a patient is symptomatic and has a type II, type III, or type IV paraoesophageal hernia.
- Previous studies have demonstrated both worse objective and subjective pulmonary function in patients with hiatal hernias. Whether hiatal hernia repair results in subjective dyspnea is an area of disagreement, with studies reporting mixed results.

OBJECTIVES

- We aimed to assess the changes in pulmonary function after repair of large hiatal hernias using a standardized questionnaire.
- Our hypothesis was that repair of large hiatal hernias would lead to improvement in clinical symptoms as measured with the St. George's Respiratory Questionnaire.

METHODS

- Single-center, prospective review of patients with type 3 or 4 hiatal hernias who were being assessed for hiatal hernia repair.
- Patients completed the initial SGRQ prior to surgery. Follow-up questionnaires were completed at 6- and 12-months in clinic or over the phone.
- SGRQ scoring uses item-specific weighting to place the total score and three sub-scores (Symptoms, Activity, Impacts) on a 100-point scale; lower scores indicate better health.
- Repeated measures ANOVA with post-hoc tests were performed for the total score and all sub-scores. Analyses were conducted using SAS v. 9.4, with $p < 0.05$ indicating statistical significance.

DEMOGRAPHICS

- $N = 54$.
- Average age = 70 years (SD: 8.9, range: 41-91).
- 89% were female, 91% were white.
- 28% had a type 4 hiatal hernia.
- Twelve-month retention was 72%.

ACKNOWLEDGEMENTS

A special thank you to Kim Carroll for her hard work in participant recruitment and data collection for this project.

REFERENCES

CONCLUSIONS

- Overall subjective respiratory health was significantly improved at 6- and 12-months post-hiatal hernia repair.
- Hiatal hernia repair significantly reduced patient self-reported symptoms and improved activity tolerance and the psycho-social burden of disease at 6- and 12-months post-op.
- No improvement was seen between the 6- and 12-month intervals, suggesting early sustained quality-of-life improvement.
- Future directions will include quantifying pre-and postoperative cardiovascular improvement through assessment of pulmonary function testing and echocardiography studies.

RESULTS

