



Laparoscopic Thal Fundoplication vs Laparoscopic Nissen Fundoplication in treatment of pediatric gastroesophageal reflux disease: a meta-analysis

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INTRODUCTION

Gastroesophageal reflux (GER), a common condition among children, has an incidence of 0.84 per 1000 person- years and prevalence of 10-20%.

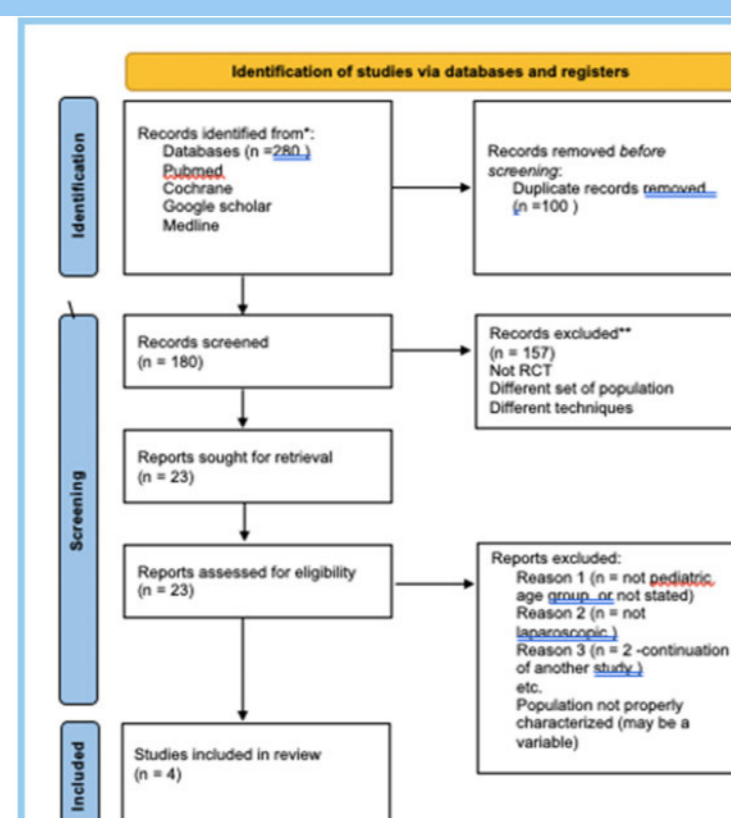
Laparoscopic fundoplication is now the standard of treatment for medically refractory pediatric GER.

There are multiple studies in comparing both Laparoscopic Thal and Laparoscopic Nissen however **consensus on the preference of one technique over the other varies**.

This study aims to determine the risk of recurrence needing revision surgery of pediatric gastroesophageal reflux who underwent either laparoscopic thal fundoplication vs laparoscopic nissen fundoplication.

METHODOLOGY

This is a meta- analysis study- articles published were retrieved through various search engines – Pubmed, Cochrane library, Google scholar up to April 2023. Outcome measures were GER recurrence, symptom recurrence with medications and post- operative dysphagia. Meta-analysis conducted using Revman 5.4.



RESULTS

A total 4 research articles were included in the study.

No statistical difference in disease recurrence between Laparoscopic Nissen vs Laparoscopic Thal (RR 1.84; 95% CI 0.89-1.78 p=0.17).

No statistical difference between the two procedures in terms of symptom recurrence resolved with medications (RR 1.35; 95% CI 0.78- 2.34).

Short- term post-operative dysphagia was higher risk of occurring among children who underwent laparoscopic Nissen with risk ratio of 0.55 [CI 0.31- 0.95].

Long- term post-operative dysphagia risk of occurring was 0.51 (CI 0.13-2.01) in favor of Laparoscopic Thal but not statistically significant with p value of 0.34.

CONCLUSION

Laparoscopic Thal procedure is a **simple and efficient** procedure on the treatment of pediatric gastroesophageal reflux disease producing **similar good outcomes** in comparison to laparoscopic Nissen's procedure.

KEYWORDS

Pediatric Gastroesophageal Reflux, laparoscopy, Laparoscopic Nissen Fundoplication, Laparoscopic Thal Fundoplication, recurrence, post-operative dysphagia

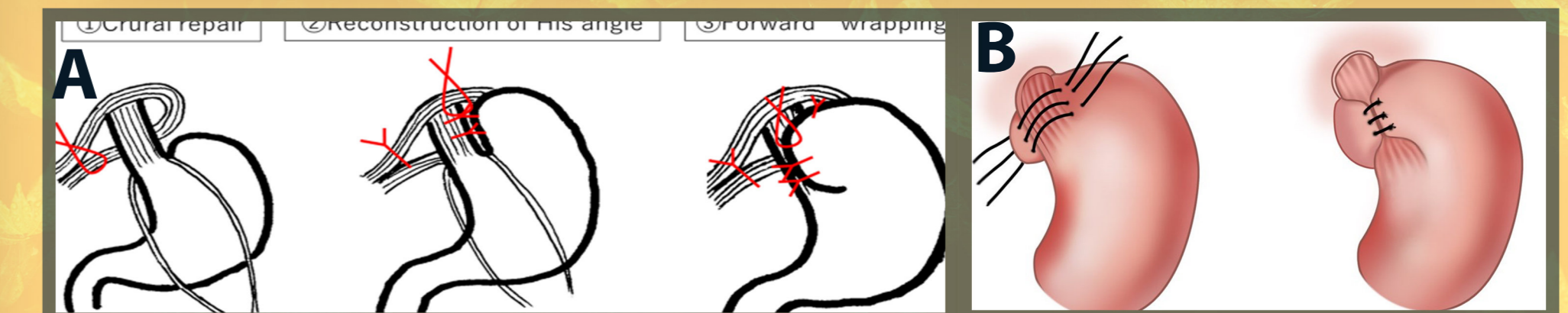


Figure A. Thal procedure and Figure B. Nissen Fundoplication

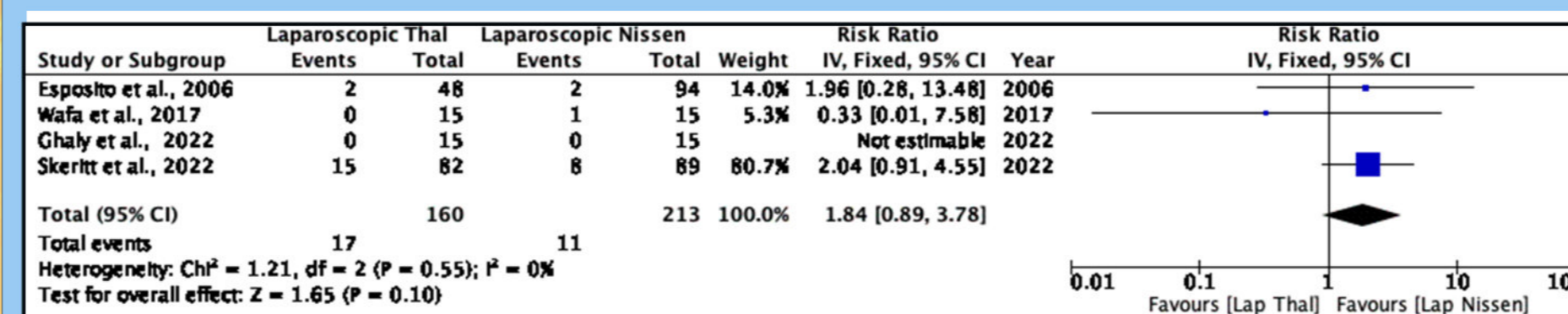


Figure 1. Forest Plot of Disease recurrence: Laparoscopic Thal vs Laparoscopic Nissen

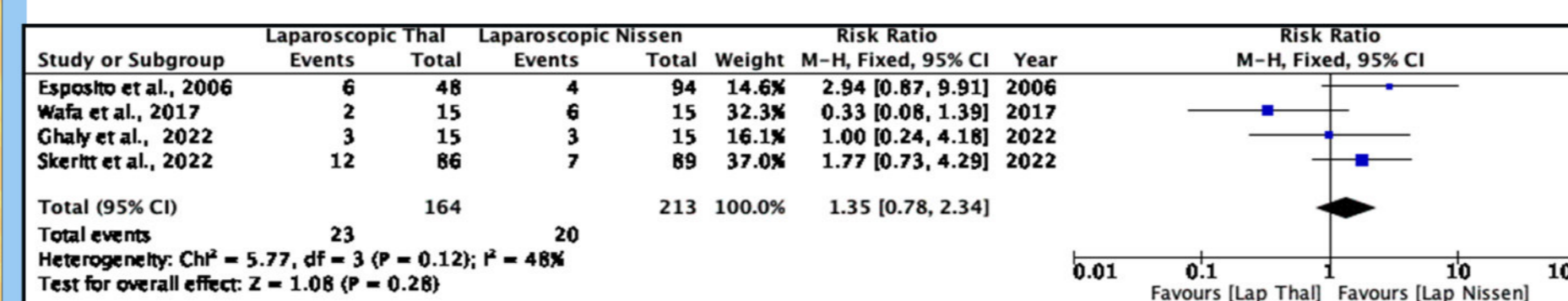


Figure 2. Forest plot of Symptom recurrence resolved with medications

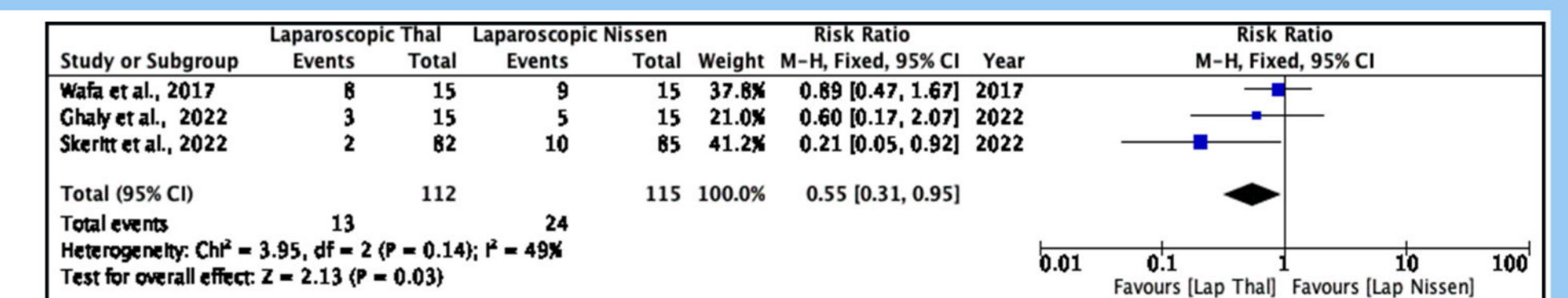


Figure 3. Forest plot of short term post-operative dysphagia

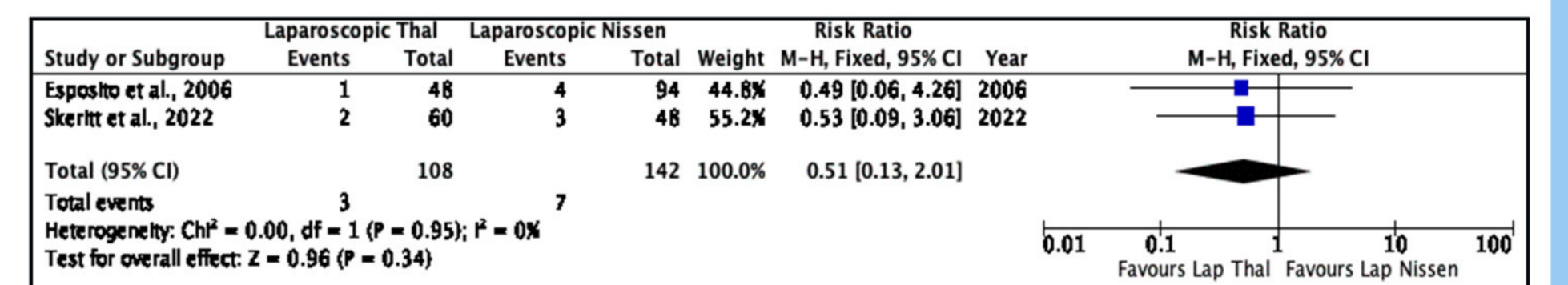


Figure 4. Forest plot of short term post-operative dysphagia