Does the Addition of a Collis Gastroplasty to Anti-Reflux Surgery Reduce Hiatal Hernia Recurrence?: A Systematic Review and Meta-Analysis

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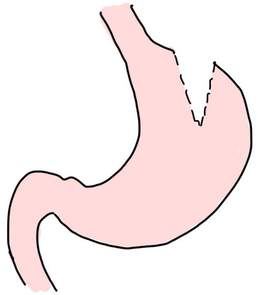
INTRODUCTION & OBJECTIVE

- Collis gastroplasty is an esophageal lengthening procedure now combined with fundoplication as an anti-reflux operation for patients with short esophagi
- The necessity of Collis gastroplasty has been questioned, leading to a decline in its popularity



We aimed to compare the recurrence rate of fundoplication for hiatal hernias with and without Collis gastroplasty.

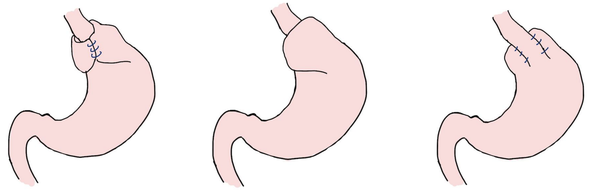
METHODS

1,317 studies screened → 17 studies included

Including	• Adult patients • Compared subgroups of fundoplication vs Collis gastroplasty • Binomial data
Definitions	• Fundoplication • Fundoplication with Collis gastroplasty
Outcomes	• Efficacy measures • Safety measures
Analysis	• Random effects model with restricted maximum likelihood

DEMOGRAPHICS

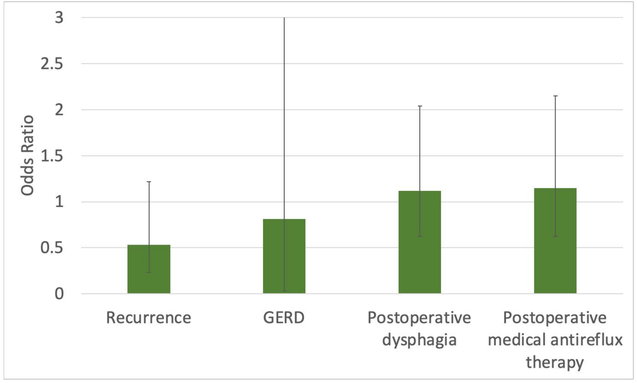
Number of patients	4,048
Age (mean +/- SD)	58.9 +/- 14.0
% female	65.4%
% Collis	35.8%



Nissen (88.0%) | Dor (0.1%) | Toupet (7.1%)

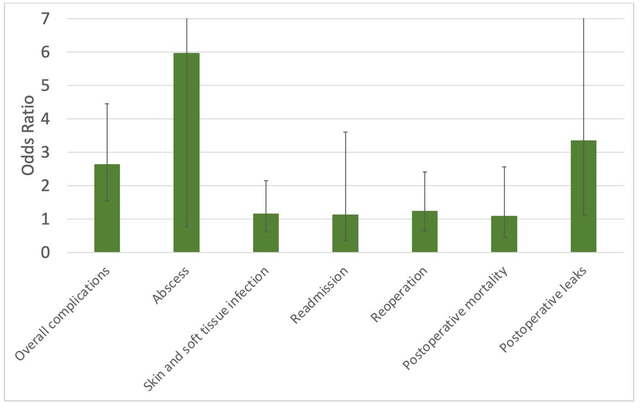
RESULTS

EFFICACY MEASURES



There was no difference in recurrence rates, postoperative dysphagia, GERD, or postoperative use of antireflux medications.

SAFETY MEASURES



There was a significantly higher rate of overall complications, surgical site infection, and postoperative leaks in the Collis gastroplasty group

CONCLUSION

- **No difference in efficacy** measures between fundoplication with and without Collis
- Concerns for a **worse safety profile with Collis gastroplasty** with higher rates of complications, surgical site infections, and postoperative leaks
- Collis gastroplasty is typically reserved for more complex cases - comparable recurrence rates may suggest that it **mitigates the increased recurrence risk** associated with the shortened esophagus

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