

Title: Selective fundoplication approach in hiatal hernia repair reduces reflux recurrence and reoperation rates

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Introduction:

Fundoplication is often performed during hiatus hernia (HH) repair to control reflux, but whether routine fundoplication improves long-term gastrointestinal outcomes remains uncertain. This study assessed the differences in the impact of routine and selective fundoplication approaches on symptomatic recurrence and reoperation rates after HH repair.

Method:

This retrospective, single-surgeon cohort study included 410 patients who underwent HH repair between February 2005 to October 2020. Patients who underwent HH repair prior to June 2014 routinely received fundoplication (non-selective era cohort; NSEC), whereas from June 2014 onwards, fundoplication was selectively performed (selective era cohort; SEC). Symptomatic recurrence rates, reoperation rates and cumulative rates were compared between the two cohorts. Statistical analyses consisted of Chi-square, Kaplan-Meier, and Cox regression analyses.

Results:

Median follow-up period of entire cohort was 32 months (IQR 3-78). The NSEC had significantly higher rates of symptomatic recurrence ($p=0.027$), reoperation ($p<0.001$), and cumulative reoperation (Log-rank $p=0.002$) compared to the SEC. Selective fundoplication and no fundoplication in the SEC were associated with lower hazard of reoperation compared to routine fundoplication (aHR 0.267, 95% CI 0.080–0.890, $p=0.032$; HR 0.402, 95% CI 0.176–0.919, $p=0.031$).

Conclusion:

In this cohort, routine fundoplication did not prevent symptomatic recurrence. On the other hand, selective fundoplication approach achieves acceptable outcomes and lowers risk of reoperation. Selective fundoplication offered physiological benefit without exposing patients without reflux to unnecessary surgical complications. However, interpretation must account for surveillance bias. Further prospective studies with standardised pre- and post-operative assessment, and follow-up protocols are needed to confirm these results.