

Mortality, reoperation and hospital stay within 90 days of primary and secondary antireflux surgery in a population-based multinational study

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Conclusion

Laparoscopic antireflux surgery has an overall favorable safety profile in the treatment of gastroesophageal reflux disease, particularly in younger patients without severe comorbidity who undergo surgery at high-volume centers.

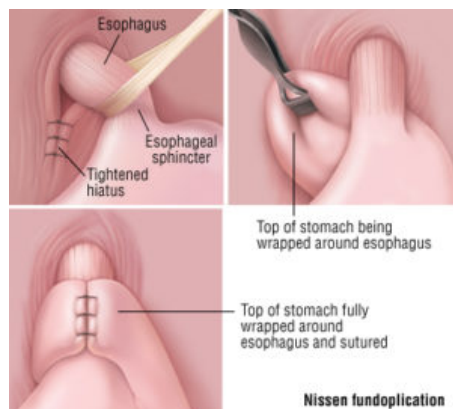
Background and aims

Absolute rates and risk factors of poor short-term outcomes after antireflux surgery remain largely unknown. We aimed to clarify absolute risks and risk factors for poor 90-day outcomes of primary laparoscopic and secondary antireflux surgery.

QR-Code. Scan the QR-code to open a tutorial video on gastroesophageal reflux disease and antireflux surgery.



Antireflux surgery procedure.



Method

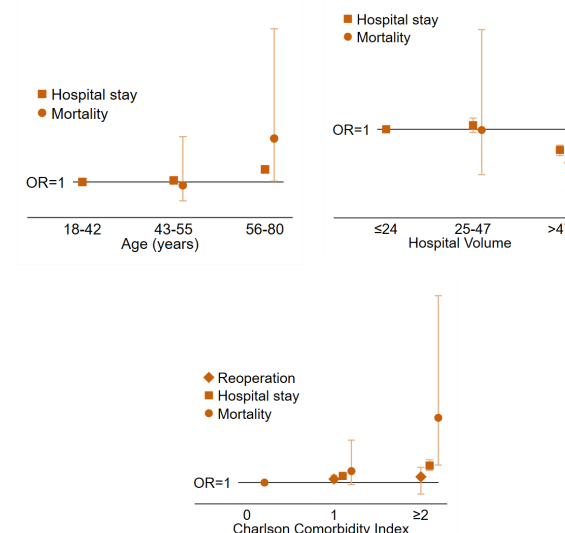
This population-based cohort study included patients who underwent primary laparoscopic or secondary antireflux surgery in any of the 5 Nordic countries in 2000-2018. Except for absolute rates, we analyzed how age, sex, comorbidity, hospital volume, and calendar period influenced 90-day mortality (main outcome), 90-day reoperation, and prolonged hospital stay (≥ 2 days over median). Logistic regression provided odds ratios (OR) with 95% confidence intervals (CI), adjusted for confounders.

Results

Among 26,193 patients who underwent primary laparoscopic antireflux surgery, postoperative the 90-day mortality and reoperation rates were 0.13% ($n=35$) and 3.0% ($n=750$), respectively. The corresponding rates after secondary antireflux surgery ($n=1,618$) were 0.19% ($n=3$) and 6.2% ($n=94$). Higher age (56-80 years vs 18-42 years: OR 2.66, 95% CI 1.03-6.85) and comorbidity (Charlson Comorbidity Index ≥ 2 vs 0: OR 6.25, 95% CI 2.42-16.14) increased the risk of 90-day mortality after primary surgery, and higher hospital volume suggested decreased

risk (highest vs lowest tertile: OR 0.58, 95% CI 0.22-1.57). Comorbidity increased the risk of 90-day reoperation. Higher age and comorbidity increased risk of prolonged hospital stay after both primary and secondary surgery. Higher annual hospital volume decreased the risk of prolonged hospital stay after primary surgery (highest vs lowest tertile: OR 0.74, 95% CI 0.67-0.80).

Age, comorbidity, and hospital volume influence 90-day postoperative outcomes following primary laparoscopic antireflux surgery.



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