Emergency Laparoscopic versus Open Colectomy for Diverticulitis: A Systematic Review and Meta-analysis

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Introduction

- The optimal approach for addressing emergency diverticulitis with perforation and peritonitis is colectomy. Nevertheless, there remains a lack of consensus regarding the preferred surgical approach, be it open or laparoscopic, for such cases.
- To address this gap, we conducted a systematic review and meta-analysis to compare laparoscopic and open surgery for emergent diverticulitis.

Methods

- We searched Cochrane Central, Scopus, SciELO, Lilacs, and PubMed/MEDLINE for studies comparing laparoscopic versus open colectomy for emergent diverticulitis.
- Key outcomes evaluated included mortality, overall postoperative complications, dehiscence, leakage, surgical site infection (SSI), readmission, reoperation, prolonged ileus, intensive care unit (ICU) admission rates, and length of hospital stay (LOS).

706
Studies were retrieved from the primary search

08
Studies were included

MAIN FINDINGS

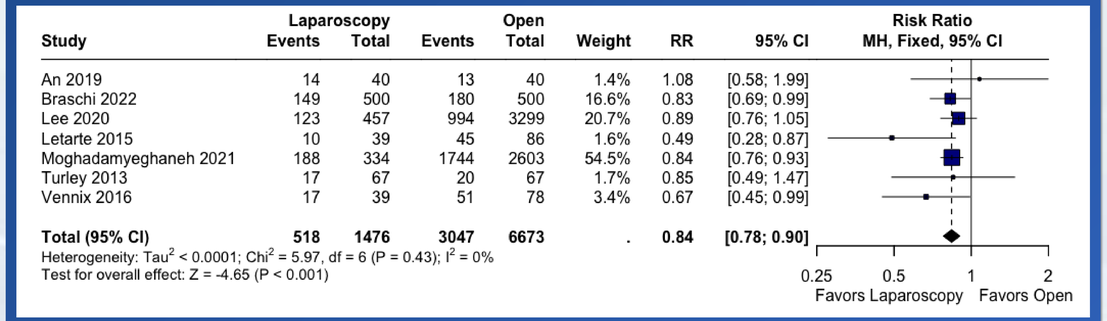


Fig. 01. Meta-analysis of general complications between laparoscopic and open colectomy

- ✓ **10,547 patients - 1,922 (18.2%) laparoscopy and 8,625 (81.8%) open.**
- ✓ **Laparoscopic surgery was associated with decreased:**
  - **Mortality (RR 0.56; 95% CI [0.42; 0.76]; P<0.001)**
  - **Surgical site infections (RR 0.67; 95% CI [0.54; 0.82]; P<0.001)**
  - **Postoperative prolonged ileus (RR 0.83; 95% CI [0.73; 0.93]; P=0.002)**
  - **Length of stay (MD -1.75 days; 95% CI [-2.6; -0.88]; P<0.001)**
- ✓ **No significant differences were observed for leakage, dehiscence, readmission, reoperation, and ICU admission rates.**

Conclusion

- Our analyses indicate that employing the laparoscopic approach in cases of emergent diverticulitis may be linked to reduced mortality, morbidity, and length of hospital stay (LOS), making it a viable option for this condition.

References

Montefiore HEALTH SYSTEM