

Postoperative outcomes in patients with perforated bowel: early versus late intervention.

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Abstract

BACKGROUND: Time to intervention is suggested to be a crucial factor for a number of surgical conditions. In this study, we aim to examine the postoperative outcomes associated with the timing of surgical intervention in patients with perforated bowel.

MATERIALS AND METHODS: Cross-sectional study using the Nationwide Inpatient Sample database, 2003-2010. The study population included adult (≥ 18 y) inpatients who had perforated intestine or colon and underwent bowel surgery.

RESULTS: A total of 5412 (64.6%) patients who had an early surgical intervention on same day of admission and 2985 (35.4%) patients who had a delayed surgery were included. Patients with comorbidities or those in hospitals in the Northeast region of the United States were more likely to have a delayed intervention ($P < 0.01$). In low-risk patients who are aged < 65 y old and with no comorbidities, the timing of surgery did not associate with the risk of postoperative complications ($P = 0.77$) and mortality ($P = 0.08$), whereas in high-risk patients who are aged ≥ 65 y old or with comorbidities, an early surgical intervention was associated with a lower risk of complications (odds ratio: 0.77; 95% CI: 0.69-0.87; $P < 0.001$), and a lower mortality risk (odds ratio: 0.79; 95% CI: 0.68-0.92; $P = 0.002$). Patients with a delayed intervention were associated with a hospital stay > 15 d ($P < 0.001$) and a higher cost of health services ($P < 0.01$).

CONCLUSIONS: Patients treated in the Northeast of the United States were more likely to experience a delayed surgery. Delay of surgical intervention is associated with unfavorable outcomes only in older patients or those with comorbidities.

KEYWORDS: Colon resection; Delayed intervention; Intestinal resection; Perforated bowel; Postoperative complication; Regional disparity

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