

Surgical site infection following bowel surgery: a retrospective analysis of 1446 patients.

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AB HYPOTHESIS: We sought to determine whether the administration of preoperative antibiotics, intraoperative transfusion of blood products, and intraoperative hypothermia has any impact on the incidence of postoperative surgical site infections (SSIs) in a heterogeneous patient population undergoing bowel surgery. **DESIGN:** Retrospective analysis. **SETTING:** From September through December 2002, data on 1472 patients undergoing bowel surgery at 31 academic medical centers in the United States were collected. **PATIENTS:** Patients were included in the analysis if they were older than 17 years of age and underwent any surgery involving the small bowel, colon, or rectum. **Main Outcome Measure** Postoperative SSI. Variables that might affect the risk for developing SSIs were analyzed using multivariate logistic regression analysis. **RESULTS:** Perioperative transfusion ($P = .04$; odds ratio, 1.64), and the presence of any infection at the time of surgery ($P = .05$; odds ratio, 2.46) were independent risk factors for SSI. Patients with a lower intraoperative temperature nadir had a lower risk for SSI ($P = .05$; odds ratio, 1.33), although this difference is not clinically significant (35.8 degrees C +/- 0.8 degrees C vs 36.0 degrees C +/- 0.9 degrees C, $P < .05$). There was a trend toward statistical significance for wound class when added to the multivariate model ($P = .09$; odds ratio, 1.41). The administration of antibiotics within 120 minutes prior to incision or within 120 minutes prior to and 120 minutes after incision had no effect on SSIs in this patient population. **CONCLUSIONS:** This study validates perioperative transfusion as an independent risk factor for SSI. The lack of effectiveness of perioperative antibiotic prophylaxis is surprising because it is discordant with the previous literature, and this finding needs further evaluation.