Infectious Complications after Major Abdominal Cancer Surgery: In Search of Improvable Risk Factors.

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BACKGROUND: Major resections for esophageal, gastric, hepatic, pancreatic, and colorectal cancer continue to be associated with a high peri-operative morbidity of up to 30%-40%. To a large extent, this morbidity is caused by infectious complications that add up to a considerable burden to patients and hospital costs. The objective of this large retrospective cross-sectional study was to determine independent patient and operation-related risk factors for infectious complications after major abdominal cancer operations to elucidate how infection rates can be reduced and improve health-care quality.

PATIENTS AND METHODS: In 1,389 cancer patients who underwent a major resection procedure between 2009 and 2013, infectious complications and their independent determinants were analyzed by multivariable logistic regression (p < 0.05).

RESULTS: Male gender was a risk factor for infections in general, whereas patients ≥65 y (odds ratio [OR] 1.75; p = 0.008), urinary tract infection (OR 0.51; p = 0.004), American Society of Anesthesiologists score (OR 1.55; p = 0.004), and neurologic comorbidity (OR 2.22; p = 0.001) were associated significantly with pneumonia. Intra-abdominal drainage (OR 1.41; p = 0.024) and a duration of surgery of ≥180 min (OR 1.85; p = 0.001) were risk factors for surgical site infections. Total parenteral nutrition was significantly associated with intravascular catheter-induced infections (OR 18.09; p < 0.001) and sepsis (OR 6.69; p < 0.001).

CONCLUSIONS: In this study, several independent risk factors for infectious complications in major abdominal cancer operations were identified, providing opportunities for further reducing peri-operative infections. General awareness and focus on preventing infectious complications may have a significant impact on health-care outcomes and costs.

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