Safety of major abdominal operations in the elderly: a study of geriatric-specific determinants of health

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Background: Preoperative assessment of geriatric-specific determinants of health may enhance perioperative risk stratification among elderly patients. This study examines effects of geriatric-specific variables on postoperative outcomes in patients undergoing elective major abdominal operations.

Methods: We examined patients included in the ACS NSQIP pilot Geriatric Surgery Research File (GSRF) program who underwent elective pancreatic, liver, and colorectal operations between 2014 and 2016. Multivariable analyses were performed to evaluate associations between patient-specific geriatric variables and risk of death, morbidity, readmission, and discharge destination.

Results: A total of 4,165 patients were included. Patients ≥ 85 years were more likely to die, more likely to experience postoperative morbidity, and more likely to be discharged to a facility (all p≤0.039) than younger patients. Preoperatively, patients ≥ 85 years were more likely to use a mobility aid, have a prior fall, have consent signed by a surrogate, and to live alone at home prior to operation (all p<0.001). After adjustment for ACS NSQIP estimated probabilities of morbidity or mortality, no geriatric-specific preoperative risk factors were significantly associated with increased risk of complications or death in any age group (all p>0.055). Patients 75-84 and ≥85 years were significantly more likely to be discharged to facility (OR 2.33 and 4.75, respectively, both p<0.001) compared to patients 65-74 years. All geriatric-specific variables: use of mobility aid, living alone, consent signed by a surrogate, and fall history, were significantly associated with discharge to a facility (all p≤0.001).

Conclusions: After adjusting for comorbid conditions, elderly patients undergoing major elective abdominal operations are not at increased risk of postoperative mortality and morbidity, however geriatric-specific variables are significantly associated with discharge to a facility. Discussion of geriatric-specific variables should be included during preoperative decision making.