Laparoscopic appendectomy in the elderly

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BACKGROUND
Evidence suggests that laparoscopic appendectomy (LA) has advantages over open appendectomy (OA) in the treatment of appendicitis. It remains, however, unclear whether LA is indicated in the elderly patient population.

METHODS
Patients with primary International Classification of Diseases, revision 9, procedure codes for LA (n=32406 patients) and OA (n=112884 patients) were selected from the 1998, 1999, and 2000 Nationwide Inpatient Samples. The end points that were under investigation were the length of hospital stay, the rate of routine discharge, and in-hospital morbidity and mortality rates. Multiple linear and logistic regression analyses were performed to assess the risk-adjusted association between the surgery type and the patient outcomes. Stratified analyses were performed according to age (65 years and older; less than 65 years old) and to the presence of appendiceal perforation or abscess.

RESULTS
After risk adjustment, patients who underwent LA had a significantly shorter mean length of stay (LA, 2.45 days; OA, 3.71 days; P <. 0001), higher rate of routine discharge (odds ratio, 2.80; P <.0001), lower overall complication rate (odds ratio, 0.92; P=.03), and mortality rate (odds ratio, 0.23; P=.001) compared with OA patients. Similar benefits of LA were found in the strata of patients who were less than 65 years old, in elderly patients, and in patients with appendiceal perforation or abscess.

CONCLUSION
LA has statistically significant advantages over OA with respect to the length of hospital stay, the rate of routine discharge, and postoperative morbidity and mortality rates for patients who are less than 65 years old, in elderly patients, and in patients with appendiceal abscess or perforation.

type: journal paper/review (English)
date of publishing: 5-2004
journal title: Surgery (135/5)
ISSN print: 0039-6060
pages: 479-88