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Short Term Outcomes of Craniotomy for Malignant Brain Tumors in the Elderly

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Abstract

Background: Disparity in resection rates for malignant brain tumors in elderly patients is partially attributed to a belief that advanced age is associated with increased risk for postoperative morbidity and mortality. The aim of this study was to investigate the effect of advanced age (≥75 years) on 30-day outcomes in patients with primary and metastatic brain tumors who underwent craniotomy for definitive resection of a malignant brain tumor. Methods: Prospective analyses of the 2006-2010 American College of Surgeons National Surgical Quality Improvement Project (NSQIP) database of 970 patients, ≥40 years of age, who underwent craniotomy for definitive resection of neoplasm. Pre- and intraoperative characteristics and 30-day outcomes were stratified by age. Using propensity scores, 134 patients (\geq 75 years) were matched to 134 patients 40-74 years of age. Logistic regression was used to predict adverse postoperative outcomes. Results: Median length of hospital stay was 5 days, the rate of minor and major complications were 5.9% and 13.1% respectively, 5.7% of patients returned to the operating room and 4.3% of patients expired within 30 days. Advanced age did not increase the odds for poorer short-term outcomes. Conclusions: Advanced age does not increase the risk of poor outcomes after surgical resection of primary or metastatic intracranial tumors, after controlling for other risk factors. These results suggest that age should not be used, in isolation, as an a priori factor to discourage pursuing craniotomy.

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