Morbidity and Mortality of Meningioma Resection Increases in Octogenarians

A presentation at the 2016 American Association of Neurological Surgeons Annual Scientific Meeting


This study utilizes a large national database to assess outcomes in octogenarians undergoing surgery for meningioma, as large-scale studies examining the effect outcomes in this group after meningioma surgery had not been conducted.

Patients were identified by CPT code in the NSQIP database. Univariate analysis was performed to compare demographics, comorbidities and postoperative complications in patients of different ages. Multivariate step-wise logistic regression was performed on each complication that demonstrated significant association with age in the univariate comparison.

In the database, 1,568 patients were identified. On univariate analysis, patients under 50 had overall complication rates of 17.9 percent, while patients aged 71-80 had rates of 29.6 percent and patients above 80 had rates of 31.2 percent. Specifically, patients in the 71–80 group and <80 group had higher rates of pulmonary complications, deep venous thromboses/pulmonary embolisms and urinary tract infections. Patients under 50 had a length of stay greater than five days 32.3 percent of the time, while patients aged 71–80 and over 80 rates were 49.2 percent and 64.5 percent, respectively.

Age had a significant impact on mortality. Patients under 50 had a 30-day mortality rate of 0.7 percent, while patients 71-80 had mortality rates of 2.5 percent and patients over 80 had mortality rates of 8.6 percent. On multivariate analysis, patients over the age of 80 were at higher risk of overall complications and prolonged length of stay. Death within 30 days was 15 times higher in patients over 80, compared to the younger groups.

In evaluating the effect of age in 1,568 patients undergoing meningioma surgery, 80 years old seems to be the statistical cut off for significantly increased morbidity and mortality.

Author Block: Jeremy Steinberger, MD; Nathan Lee, BA; Parth Kothari, BA; Ahmed Awad, MD; Christopher Sarkiss, MD; Eric Oermann, MD; John Caridi, MD; Raj Shrivastava, MD (New York)

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