Variation in Carotid Artery Stenting Outcomes

According to a study published in *JACC: Cardiovascular Interventions*, hospitals performing carotid artery stenting vary in rates of in-hospital stroke or death - from 0 to 18 percent overall and from 1.2 to 4.7 percent when accounting for variation in health of patients at admission.

The study was led by Beau M. Hawkins, M.D, a cardiologist at the University of Oklahoma Health Sciences Center, and Robert W. Yeh, M.D, a cardiologist at the Massachusetts General Hospital. The researchers used data from the American College of Cardiology's CARE Registry. They assessed 19,381 procedures from 188 hospitals that each performed more than five carotid artery stenting procedures between 2005 and 2013.

The study authors note that in patients with similar risk profiles, the odds of suffering stroke or death differ by about 50 percent from one medical facility to another. This suggests a difference in quality among hospitals that perform this procedure.

The results of the study show that the average rate of stroke or death across all patients included in the study was 2.4 percent, with death or stroke rates among participating hospitals ranging from 0 to 18.8 percent.

In order to understand the reasons for the differences, the researchers conducted a second analysis that adjusted for variation in risk factors, including age, prior stroke, impending major surgery, and the presence of a heart flutter. Adjusted death and stroke rates ranged from 1.2 percent to 4.7 percent. No connection was found between procedural volume and outcomes.

The authors feel that the difference may be due to therapeutic advances such as blood-clot protection devices and improved patient selection. They also speculate that the hospitals that were included in the study may have more comprehensive measures in place or may have more rigorous credentialing standards for providers performing carotid artery stenting.

The authors note, "Our findings are important because they demonstrate that carotid stenting is being performed with good results across a large number of hospitals in the United States. However, our analyses also suggest that some hospitals are achieving better outcomes than others, and it will be important to identify the reasons for this so that all centres offering this therapy can achieve exceptional outcomes."

Source: American College of Cardiology

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