

Stroke risk increases from stenting in older patients

16 February 2016, by Bob Shepard



Vascular surgery appears to be safer than stenting for patients over 70 years of age with carotid stenosis, or a blockage of the carotid arteries in the neck, according to new findings published today in *The Lancet*.

The international study, led by investigators at the University of Alabama at Birmingham, looked at the two standard methods for treating [plaque buildup](#) in the [carotid](#) arteries: a [surgical procedure](#) called carotid endarterectomy against [carotid artery](#) stenting.

The surgical procedure, or CEA, involves surgeons' opening up the artery to remove plaque. It is an invasive surgery first done in 1946. Stenting is a newer, less [invasive procedure](#) in which a catheter is threaded through blood vessels, usually from the groin, to the affected area in the artery. A balloon is used to open the blocked artery, and a mesh stent is placed to hold it open.

"Stenting was hailed as a less invasive alternative

to surgery, one that avoided many of the hazards and risks inherent in a surgical procedure," said George Howard, Dr.P.H., professor in the Department of Biostatistics in the UAB School of Public Health and the study's first author. "What we find, however, is that the risk of stroke in patients over the age of 70 is twice that with stenting than with the surgical CEA procedure."

The study looked at data from four [randomized controlled trials](#) within the Carotid Stenosis Trialists' Collaboration with patients with symptomatic carotid stenosis. Collectively, 4,754 patients were followed. Age was not associated with increased stroke risk for either surgery or stenting in patients under age 70; but stent [patients](#) over 70 had an increased risk, particularly in the immediate time frame of the procedure.

"These findings are very conclusive—stenting has a higher risk for stroke over carotid surgery in the older patient, older than 70," Howard said. "This study should help drive decision-making and establish appropriate practice guidelines in the treatment of [carotid stenosis](#)."

Howard says the stenting procedure itself seems to be causing the increased risk.

"The risk appears centered on the periprocedural period, the time during and immediately after the procedure," Howard said. "The risk does not appear to continue in the months or years following the procedure."

Howard acknowledges that advances in stenting, such as the routine use of closed-cell stents, which seem to be associated with lower rates of procedural stroke and the development of novel protection systems, might allow safe stenting for elderly people in the future.

"But for now, stenting in an older population needs to be done with great caution," he said.

More information: Loci associated with ischaemic stroke and its subtypes (SiGN): a genome-wide association study. DOI: [dx.doi.org/10.1016/S1474-4422\(15\)00338-5](https://doi.org/10.1016/S1474-4422(15)00338-5)

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