

New results in carotid artery stenosis versus endarterectomy

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Doctors have long known that patients with carotid artery stenosis, narrowed blood vessels in the neck, are at significant risk for a stroke. The condition has severe implications. Annually, in the United States, 795,000 patients have strokes that often result in long-term disability or death. For years, however, researchers in North America and Europe have tried to determine the most effective method to treat narrowed or partially blocked carotid vessels. In the December issue of *Mayo Clinic Proceedings*, an interdisciplinary team of Mayo Clinic physicians reviewed the most current data available, especially the results of two recent, widely anticipated randomized studies, and provided a new analysis of the two major interventions for carotid occlusive disease.

In the review, the authors address a long-standing controversy as they point out that stenting, the decade-old procedure in which a tiny mesh scaffold is implanted to widen the vessel, can perform as well as endarterectomy, which is surgery to remove the blockage in the carotid vessels. "The medical literature up until now has largely come down against carotid stenting as an effective treatment, but the latest randomized studies suggest that for some populations and under some conditions, stenting may be as good as, if not better than, other modes of treatment," says lead author William Perkins, M.D., from the Mayo Clinic Department of Anesthesiology.

One significant factor affecting outcomes is the age of the patient. According to the Carotid Revascularization [Endarterectomy](#) vs Stenting Trial (CREST) conducted at medical centers in the U.S. and Canada, and

the International Carotid Stenting Study, stenting proved to be an effective treatment for patients younger than 70 who have symptoms related to the carotid occlusive disease.

For patients older than 70 who have severe stenosis, however, surgery provided a better option reducing [stroke](#), although surgery offered no benefit over stenting when researchers added the risk of a subsequent heart attack. "There's a significant age effect that was borne out by both studies," Dr. Perkins says.

While neither of the studies were designed to examine the effect of experience it is likely that as with all other skills, experience matters. "Carotid artery stenting is relatively new and still evolving and there are fewer mentors with the depth of experience there is for carotid surgery," Dr. Perkins says. "At centers of excellence where stenting is done frequently, patients may have better outcomes than at places where it's not often performed."

The authors hope the review will help clinicians and patients make informed choices about which treatment is most appropriate to address each case of carotid occlusive disease. They hope the analysis also will encourage doctors to refer patients to medical centers with extensive experience performing the procedures. "I think these studies offer the best data so far indicating that stenting and surgery are both viable interventions and that there are patient populations that will benefit more from one treatment or the other," Dr. Perkins says.

More information: www.mayoclinicproceedings.com/

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