Stroke risk with symptomatic carotid stenosis

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Naturally, the question arises as to whether we are also making progress with extracranial ICA stenosis. In this issue of Neurology®, Johansson et al. provide a snapshot of the short-term risk in patients with symptomatic 50%–99% ICA stenosis. The authors collected information from 3 European centers in which patients with >50% ICA stenosis presented with a recent stroke or TIA. Patients considered unsuitable for CEA or carotid artery stenting and those who received revascularization within 24 hours of presentation were excluded from the study.

Among 607 patients who were analyzed at the 3 centers, 227 were considered unsuitable for revascularization and 67 were excluded for unclear reasons. In the remaining 377 patients, the pooled risk of recurrent ipsilateral stroke was 11.5% at 14 days and 18.8% at 90 days. There was an increased risk for stroke in patients presenting with cerebral events as opposed to retinal ischemia. Increasing age was also associated with 90-day stroke recurrence.

How do these data compare with other recent studies? A single-center study from Denmark evaluated the stroke risk in patients with severe carotid stenosis who were awaiting CEA. After the introduction of a best medical therapy regimen, consisting of dual antiplatelet therapy and statin treatment, the rate of recurrent neurologic events prior to carotid surgery fell from 29% to 2.5%, with all the events in the latter group being TIA. The disparity between this study and that of Johansson et al. is striking. There is also accumulating evidence that optimal medical therapy (OMT) has lowered the stroke rate for patients with asymptomatic carotid stenosis.

The current study has limitations. These include the fact that the centers used primarily hospital-based registries. The criteria for diagnosis of recurrent stroke and whether neuroimaging with MRI was required is not clear. Also, as the authors point out, there was not a uniform regimen of OMT at the 3 centers, with one third of patients not receiving early statin therapy. In patients with information on lipid treatment, 16/48 (33%) of the recurrent stroke events occurred in patients who did not receive statins in the first 2 days. Finally, the mechanism of recurrent events (embolic, hemodynamic) is not well-characterized.

Going forward, we need to intensify both acute and longer-term medical therapy and we also need to modernize our evidence base for decision-making in patients with symptomatic carotid stenosis. Rather than treating our patients based on 1991 data, we should perform new randomized trials in patients comparing current OMT alone to OMT + carotid revascularization. It would make sense to initiate these trials in patient groups that tend to derive less benefit from CEA, such as women, patients with retinal ischemia, and patients with the last symptomatic event more than 2 weeks previously. OMT proved to be the best option for patients with intracranial stenosis and there is reason to believe that it could also prove to be so for some patients with extracranial disease as well. Clinicians and patients deserve an answer to this important question.
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S. Chaturvedi serves on the executive committee of the CREST 2 clinical trial. P. Rothwell is Chair of the Outcomes Adjudication Committee of the ACST-2 trial and serves on the Steering Committee of the ECST-2 trial. Go to Neurology.org for full disclosures.

REFERENCES