Cerebrovascular Events in Individuals With Asymptomatic Carotid Disease

To the Editor:

I read with great interest the article by Goessens and colleagues about the prognosis of asymptomatic carotid stenosis in patients with manifest arterial disease. I concur with their statement that asymptomatic carotid stenosis is a predictor of vascular events including vascular death, and I also agree with a global management approach including identification and control of appropriate vascular risk factors including lifestyle changes and appropriate antithrombotic medication. However, I feel that their study provides an incomplete picture of the clinical risk especially with regards to the incidence of ischemic stroke (annual stroke risk of <1%) and that this may lead to less than optimal clinical decisions in some cases because of inherent limitations of their study.

First, it is not clear whether a certain proportion of eligible patients were lost to follow-up because this obviously could have affected the incidence of reported vascular events. As well, the possibility of missing potentially important clinical information (transient ischemic attack [TIA]) remains a concern because the design of this study called only for a biannual questionnaire and not a prospective clinical reassessment at regular intervals. Another limitation is the lack of repeated measurements to assess carotid stenosis over time, which could have determined the rates of progression and potentially identify a higher risk group for neurological events such as either TIAs or cerebral infarction. The early identification of TIA in patients with high degree of carotid disease is important because of the increased risk of ischemic stroke in this context.

Our group previously reported in a similar but larger cohort (n = 357 with ≥50% stenosis) of neurologically asymptomatic individuals followed prospectively, a strong graded relationship between the degree of carotid stenosis documented at baseline assessment and the risk of all vascular events including TIA and ischemic stroke. The annual rate for ischemic stroke was 1.3% for <50% carotid stenosis, 2.2% for ≥50% and 3.6% for ≥80% stenosed arteries. Progression of carotid stenosis was also found to influence prognosis. Over an average follow-up of 3.6 years, 74 individuals with 50% to 79% degree of stenosis progressed to ≥80% (yearly progression rate of 16.4%); this was significantly associated with a 6-fold increased risk of ipsilateral TIA or ischemic stroke compared with those who did not progress to this level. The exact reasons for this difference in the reported incidence of neurological events between both studies is not clear but could be due to the particular vascular risk profile of individuals which influenced the types of vascular events during follow-up.

I would thus suggest that some individuals with clinical manifestation of other vascular conditions and concomitant asymptomatic carotid stenosis may be at higher risk for cerebrovascular events, in particular those with a high degree (≥80%) of carotid stenosis and those who progress to such a level of occlusive disease. Management should focus on preventive measures and include education of the individuals about potential symptoms (early TIA detection), counseling about lifestyles and vascular risk factors, optimal medical treatment (antihypertensives, statins and antithrombics) and prophylactic carotid endarterectomy in selected cases taking into consideration life expectancy and surgical morbidity/mortality rates.

Disclosures

None.

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