Letter by Weimar and Knipp Regarding Article, “Patients With Severe Asymptomatic Carotid Artery Stenosis Do Not Have a Higher Risk of Stroke and Mortality After Coronary Artery Bypass Surgery”

To the Editor:

We read with great interest the article by Mahmoudi et al.1 In this retrospective analysis of 878 consecutive patients undergoing coronary artery bypass graft (CABG) surgery, the authors found similar perioperative stroke rates and mortality in 117 patients with ≥75% asymptomatic carotid artery stenosis (CAS) compared with 761 patients without severe CAS. The authors conclude that these results argue against routine synchronous carotid intervention in patients with asymptomatic severe CAS undergoing CABG but that such an approach is indicated in a selected cohort of patients, such as those with the most severe disease in association with unstable cardiac symptoms and/or significant comorbidities. Another retrospective study identified a higher risk of stroke during isolated CABG only in those patients with an impaired cerebral autoregulation distal to severe carotid stenosis.2 However, none of these or previous studies have routinely assessed patient outcome by a neurologist or could provide a long-term follow-up.

In a meta-analysis including 5223 patients with asymptomatic CAS, patients undergoing isolated carotid endarterectomy fared better than those treated medically for the outcome of perioperative stroke or death or any subsequent stroke over 5 years (relative risk: 0.69 [95% CI: 0.57–0.83]).3 Thus, there is a mild superiority of this operation compared with standard medical therapy, provided that the carotid endarterectomy can be done with a perioperative morbidity and mortality of <3%. Even then, ∼20 patients have to be treated to prevent 1 stroke over a period of 5 years. In addition, the majority of conservatively treated patients were included >10 years ago and were not treated according to current recommendations and guidelines. Nevertheless, neither these findings nor the ongoing randomized, controlled trials, Transatlantic Asymptomatic Carotid Intervention Trial and Stent-Protected Angioplasty Versus Carotid Endarterectomy in Asymptomatic Carotid Artery Stenosis, can provide an answer for the optimal treatment of patients with severe CAS requiring CABG surgery. Because it remains speculative which patients might benefit from combined carotid and coronary revascularization, surgical treatment in patients with severe CAS undergoing CABG is managed variably, often depending on institutional and surgeon preferences.

Thus, a randomized, controlled trial is urgently needed to answer this open question and to provide a basis for defining an evidence-based standard. Coronary Artery Bypass Graft Surgery in Asymptomatic Carotid Stenosis is a randomized, controlled, open, multicenter group sequential trial with 2 parallel arms and outcome adjudication by blinded observers that has been registered under www.controlled-trials.com/ISRCTN13486906.4 Patients with asymptomatic, high-grade carotid stenosis scheduled for elective CABG are randomly assigned to either isolated CABG or synchronous CABG and carotid endarterectomy. The trial started in December 2010, aiming at recruiting 1160 patients in 25 to 30 German cardiovascular centers. The composite primary efficacy endpoint is the number of strokes and deaths from any cause (whatever occurs first) within 30 days after operation. A 4.5% absolute difference (ie, 4.0% compared with 8.5%) in the 30-day rate of the above end points can be detected with >80% power. Secondary end points include single components of the primary end point, myocardial infarction, technical failures, duration of ventilatory support, change of cognitive performance, and observations at different time points ≤5 years. The results of this trial are expected to have an important impact on managing patients with severe CAS undergoing CABG.

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Disclosures

None.

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