INVITED COMMENTARY

Comments regarding ‘Carotid Endarterectomy within Seven Days after the Neurological Index Event is Safe and Effective in Stroke Prevention’

J.P.P.M. de Vries a,*, J.A. Vos b

a Department of Vascular Surgery, St. Antonius Hospital, Koekoekslaan 1, 3435 CM Nieuwegein, The Netherlands
b Department of Interventional Radiology, St. Antonius Hospital, Koekoekslaan 1, 3435 CM Nieuwegein, The Netherlands

Available online 25 September 2011

The conclusions drawn in the large retrospective study of Rantner and coworkers (early carotid endarterectomy (CEA) is safe and will prevent stroke in the majority of patients) are clear, but might need some refinements.1 At present, we cannot tar every patient with a symptomatic carotid stenosis with the same brush. Rerkasem et al. performed a systemic review of the operative risks of CEA for recently symptomatic patients in relation to timing of surgery.2 The pooled absolute risks of stroke and death after urgent CEA were up to 20% in patients with stroke-in-progress, and 11.4% in patients with crescendo transient ischemic attacks (TIA). Only in the group of neurologically stable patients (TIA or minor stroke) no differences were found between early (< 1 week) and delayed surgery. Similar findings have been published in a meta-analysis of Patterson and coworkers (odds ratio of 5.6 for combined stroke/death in patients with crescendo TIs in comparison with CEA for stable patients, and an odds ratio of 5.5 for patients with unstable stroke).3 Therefore, the decision whether or not to perform urgent CEA must be more individualized. Several important aspects have to be taken into account and tackled. Until now, there is a lack of consensus concerning the definitions used for crescendo TIs and stroke-in-progress or unstable stroke. Uniform definitions are needed to determine these subgroups of patients. Within these particular subgroups patients at highest risk for peri-CEA complications should be identified. Criteria like the American Society of Anesthesiologists class and Rankin scores can be used, but clinical scoring systems might fall short. As stated by Rantner et al. neuroimaging should be performed in every symptomatic carotid patient to identify morphological defects. The occurrence of defects will increase the risk of complications during urgent repair. Another modality is the use of magnetic resonance imaging (MRI) to demonstrate diffusion-perfusion mismatch for identification of reversible ischemic brain lesions.

During the coming years non-invasive evaluation of carotid plaque vulnerability is expected to increase enormously, with the implementation of dedicated positron emission tomography, 7-T MRI, (plaque) biomarkers, etc. It seems reasonable to reserve urgent CEA for the most vulnerable carotid plaques.

Finally, we need to improve best medical treatment for the subgroup of patients deemed unfit for surgery and for patients in whom urgent CEA has to be postponed because of large morphological defects at initial scans. Besides optimization of the well-known vascular risk factors, carotid plaque stabilizing medication may be prescribed to reduce plaque inflammation and risk for new adverse events.4

It can be concluded that urgent CEA for symptomatic carotid stenosis is safe and must be performed in neurologically stable patients. However, more research has to be performed for tailor made treatment of high risk patients with unstable symptoms and morphologic defects at initial

DOI of original article: 10.1016/j.ejvs.2011.08.004.
* Corresponding author. Tel.: +31 30 6092056.
E-mail address: j.vries@antoniusziekenhuis.nl (J.P.P.M. de Vries).

1078-5884/$36 © 2011 European Society for Vascular Surgery. Published by Elsevier Ltd. All rights reserved.
neuroimaging. Analogous to the findings of the EVAR-2 trial it appears reasonably to try to identify patients who should not be operated at all but have to be treated with plaque stabilizing medication.

References


