INVITED COMMENTARY

Are Delays to Perform Carotid Endarterectomy in Symptomatic Stenosis Inevitable for Some Patients?

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For decades, pursuing a reduction in peri-operative stroke rates, surgeons hesitated to perform early carotid endarterectomy (CEA) in patients with symptomatic carotid stenosis. This was common practice during the time the historical trials recruited patients, allowing overall benefit assessment of CEA in relation to time from the last event to randomisation in a pooled analysis.[1] Surgical benefit was greatest in patients randomised within two weeks of their last ischaemic event ($p = .009$). The number needed to treat to prevent one ipsilateral stroke in five years was five for patients randomised within two weeks *vs.* 125 for patients randomised after more than 12 weeks. In an overview of contemporary natural history studies, the ESVS carotid guidelines reported that recurrent stroke after the index transient ischaemic attack occurs as frequently as 25% at two weeks.[2] These rates of recurrent stroke at two weeks were similar to those observed at five years in patients randomised to best medical treatment in the historical CEA trials, suggesting that many patients who suffered an early stroke after onset of symptoms were never randomised. As a result of the available evidence, strong recommendations have been made towards early surgery, within two weeks.[2]

In this issue, Kuhrij and colleagues report on factors associated with hospital dependent delay to CEA in the Dutch Audit for Carotid Interventions (DACI).[3] Acknowledging the fact that the two week target is often not met in real world practice, the DACI investigators studied 8620 patients. The median time to CEA was 11 days and 78% of patients underwent CEA within two weeks of first hospital consultation in DACI. Factors associated with a hospital dependent waiting time longer than two weeks were younger age, any previous CEA, ocular symptoms as index event, and indirect referral. Interestingly, high volume hospitals reported the shortest delay for indirectly referred patients, prompting the authors to suggest that their logistics are more efficiently organised.

The investigators of the mandatory DACI should be commended, because 78% of all patients had on target, timely CEA performed within two weeks of hospital consultation. This may appear better than reports from other national registries, such as those from Norway, Sweden, the UK, and Germany, where the corresponding on target rates were 62%, 63%, 52%, and 72%, respectively.[2,4] However, these rates refer to delay from onset of symptoms, making direct comparisons impossible. Although ocular symptoms are not so notorious as to prompt expedited investigation for carotid stenosis, the association of the other predictors with delays in performing CEA cannot be fully explained. This association could be indicative of confounders such as worse neurological status and large area brain infarction managed expectantly, awaiting improvement before CEA is performed, as suggested by the guidelines and others.[2,5] Nevertheless the neurological risks of CEA have been reduced in recent years,[6] which should improve compliance with guideline recommendations in favour of early CEA.

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