

Nothing New Under the Sun of the European Society for Vascular Surgery Carotid Guidelines

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In the last decade, a great debate has been taking place on the real benefit of invasive treatment for asymptomatic carotid stenosis (ACS) owing to the significant improvements in medical therapy and cardiovascular risk reduction strategies. The unresolved question is whether carotid endarterectomy (CEA) or carotid artery stenting plus best medical therapy (BMT) are still superior to BMT alone in the prevention of stroke in patients with ACS. Much research focus has therefore been undertaken to identify specific subgroups of patients with ACS that may present an increased risk of stroke while on BMT alone. The interesting work by Morris and colleagues¹ falls within this context and may provide further evidence.

Their prospective cohort study investigated the risk of stroke in patients without classical symptoms of transient ischaemic attack (TIA) or stroke. A total of 504 patients with a 50 – 99% carotid artery stenosis were enrolled and followed for a median of 5.1 years. The authors focused on patients presenting with non-focal neurological symptoms ($n = 47$), focal symptoms > 6 months earlier ($n = 82$), and those with prior contralateral CEA ($n = 71$). The remaining control group patients ($n = 304$) were defined by the authors as those with no symptoms. The primary outcome was ipsilateral ischaemic stroke, and secondary outcomes were any ischaemic stroke as well as cardiovascular death.

ACS refers to a stenosis detected in patients without any clinical history of ipsilateral ischaemic stroke, TIA, or other neurological symptoms, which might be referable to the carotid arteries within the preceding six months.² The term non-hemispheric or non-focal symptoms is applied to patients with isolated syncope (blackout, drop attack), pre-syncope (faintness), isolated dizziness, isolated double vision (diplopia), tinnitus, and isolated vertigo. There is no evidence that patients with non-hemispheric symptoms benefit from carotid (or vertebral) interventions.³

In the study by Morris *et al*, there were no statistically significant differences in the annual rate of ipsilateral stroke among people with non-focal symptoms, prior contralateral CEA, or ipsilateral symptoms > 6 months earlier compared

with those with no symptoms. There were no significant differences in secondary outcomes across groups. The authors concluded that non-focal symptoms are not a warning sign of high risk of stroke.

Despite the potential relevance of this study, which certainly adds to our knowledge, many limitations exist, and these should be carefully evaluated in order to appreciate the study findings with an appropriate perspective. Moreover, the 2017 European Society for Vascular Surgery (ESVS) guidelines⁴ were the first to propose clinical and imaging criteria (maintained unchanged in the 2023 ESVS guidelines³) for identifying a higher risk of stroke in the BMT cohort in whom CEA or carotid artery stenting might be targeted. Criteria include silent infarction on CT/MRI, $\geq 20\%$ stenosis progression, large plaque area or large juxtaluminal black area on computerised ultrasound plaque analysis, plaque echolucency, intraplaque haemorrhage on MRI, impaired cerebral vascular reserve, and at least one spontaneous micro-embolic signal during ≥ 1 hour of transcranial Doppler monitoring. Unfortunately, none of these cohorts of ACS patients were analysed in the study by Morris and colleagues, thereby limiting our ability to look deeper into probably more interesting subsets of ACS patients.

REFERENCES

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