Implications Of The 2014 Revisions Of The AHA Guidelines For Symptomatic Patients: What Was Changed And What Should Have Changed.

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Stenting versus Endarterectomy for Treatment of Carotid-Artery Stenosis


Among patients with symptomatic or asymptomatic carotid stenosis, the risk of the composite primary outcome of stroke, myocardial infarction, or death did not differ significantly in the groups undergoing carotid-artery stenting and the group undergo- ing carotid endarterectomy.

Published on May 26, 2010 at NEJM.org


No one disputes that CAS will assume an important and increasing role in the management of patients with symptomatic carotid disease, but it does seem incredible that data from the largest-ever randomized trial comparing CEA with CAS in recently symptomatic patients (International Carotid Stenting Study [ICSS]) was completely ignored in this document.

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Guidelines for the Prevention of Stroke in Patients With Stroke or Transient Ischemic Attack: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association


Stroke 2011;42:272-276; originally published online Oct 21, 2010

CAS is indicated as an alternative to CEA for symptomatic patients at average or low risk of complications associated with endovascular intervention when the diameter of the lumen of the internal carotid artery is reduced by >70% by noninvasive imaging or >50% by catheter angiography (Class II, Level of Evidence B).

In response to Dr. Naylor’s correspondence, we regret that the timing of publication of the International Carotid Stenting Study (ICSS) precluded its incorporation into this version of the Guidelines.

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ICSS published their findings on February 26, 2010, the same day CREST released its data into the public domain at the International Stroke Conference. CREST subsequently published its findings (ahead of print) on May 26, 2010, with the trial outcomes finally appearing in print in July 2010.

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For symptomatic patients, the periprocedural stroke and death rates were 6.0% ± 0.9% for CAS and 3.2% ± 0.7% for CEA (hazard ratio, 1.89; 95% CI, 1.11 to 3.21; P = 0.02).

Women assigned to CAS had higher stroke rates in the periprocedural period than did those assigned to CEA (hazard ratio, 2.63; 95% CI, 1.23 to 5.65; P = 0.013).

Results—Age acted as a treatment effect modifier for the primary endpoint (P-interaction = 0.02), with the efficacy of CAS and CEA approximately equal at age 70 years. For CAS, risk for the primary and principal outcomes increased with age (P(0-100) = 1.77-8.64% women; 1.39-5.28% men). However, there was no evidence of increased risk for CEA-treated patients (P = 0.52). Stroke events were the primary contributor to the overall effect modification (P=0.065; AHR = 1.31).

Influence of sex on outcomes of stenting versus endarterectomy: a subgroup analysis of the Carotid Revascularization Endarterectomy Versus Stenting Trial (CREST)

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Guidelines for the Prevention of Stroke in Patients With Stroke and Transient Ischemic Attack

A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association

The American Academy of Neurology offers the value of this guideline as an educational tool for neurologists. Endorsed by the American Association of Neurological Surgeons and Congress of Neurological Surgeons.

Walter N. Kanter, MD, Chair; Rony Orvieto, MD, MS; Maral Vay, Chair; Huny, B, Rich, MD; Davia M. Ruprai, MD, Marc L. Cluskey, MD, FAHA; Michael D. Ekenkofe, MD, FAHA; Margaret C. Fong, MD, MPH; Mar Fishka, MD, FAHA; Karen L. Ford, MD, MPH; FAHA; Donald V. Hub, MD, S. Glister (Day). Johnson, MD, PhD; Scott E. Keaveny, MD, FAHA; Sarah J. Kemeny, MD, MPH; FAHA; Patrick H. Mitchell, MD, RN, FAHA; Michael W. Rich, MD; Bhavna Rudhram, PhD, Lea H. Schuster, MD, FAHA; John A. Wilson, MD, on behalf of the American Heart Association Stroke Council; Council on Cardiovascular and Stroke Nutrition; Council on Clinical Cardiology, and Council on Peripheral Vascular Disease.

(Clin. 2014;5;2066-2236.)

CAS is indicated as an alternative to CEA for symptomatic patients at average or low risk of complications associated with endovascular intervention when the diameter of the lumen of the ICA is restored by >70% by catheter-based imaging or noninvasive imaging with collateralization and the anticipated rate of peri-procedural stroke or death is <8% (Class IIa, Level of Evidence B). (Revised recommendation)

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It is reasonable to consider patient age in choosing between CAS and CEA. For older patients, do, older than ~75 years, CAS may be associated with improved outcomes compared with CEA, particularly when arterial occlusion is unavoidable for endovascular intervention. For younger patients, CAS is equivalent to CEA in terms of risk for peri-procedural complications (ie, stroke, MI, or death) and long-term risk for procedural stroke (Class IIa, Level of Evidence B).

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Stroke/Death Rates Following Carotid Artery Sterling and Carotid Endarterectomy in Contemporary Administrative Dataset Registrars: A Systematic Review

(Stroke. 2014;5;2066-2236.)

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