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What's New in the AHA/ASA Secondary Stroke Prevention Guidelines? CME / ABIM MOC / CE

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Clinical Context

Risk for recurrent stroke or TIA is high but can be lowered by appropriate secondary stroke prevention. As secondary stroke prevention strategies have improved in recent years, cohort studies have shown decreased rates of recurrent stroke and transient ischemic attack (TIA).

Study Synopsis and Perspective

When possible, diagnostic tests to determine the cause of a first stroke or TIA should be completed within 48 hours after symptom onset, the American Heart Association (AHA) and American Stroke Association (ASA) say in an updated clinical practice guideline.

"It is critically important to understand the best ways to prevent another stroke once someone has had a stroke or a TIA," Dawn O. Kleindorfer, MD, chair of the guideline writing group, says in a news release.

"If we can pinpoint the cause of the first stroke or TIA, we can tailor strategies to prevent a second stroke," according to Dr Kleindorfer, professor and chair, Department of Neurology, University of Michigan School of Medicine, Ann Arbor, Michigan.

The updated guideline was published online May 24 in *Stroke*.^[1]

"The secondary prevention of stroke guideline is one of the [ASA's] 'flagship' guidelines, last updated in 2014," Dr Kleindorfer says.

The update includes "a number of changes to the writing and formatting of this guideline to make it easier for professionals to understand and locate information more quickly, ultimately greatly improving patient care and preventing more strokes in our patients," she notes.

Let Pathogenic Subtype Guide Prevention

For patients who have survived a stroke or TIA, management of vascular risk factors, particularly hypertension, diabetes, cholesterol/triglyceride levels, and smoking cessation, are key secondary prevention tactics, the guideline says.

Limiting salt intake and/or following a heart-healthy Mediterranean diet is also advised, as is engaging in at least moderate-intensity aerobic activity for at least 10 minutes 4 times a week or vigorous-intensity aerobic activity for at least 20 minutes twice a week.

"Approximately 80% of strokes can be prevented by controlling blood pressure, eating a healthy diet, engaging in regular physical activity, not smoking, and maintaining a healthy weight," Amytis Towfighi, MD, vice-chair of the guideline writing group and director of neurologic services, Los Angeles County Department of Health Services, notes in the release.

For healthcare professionals, the guideline says specific recommendations for secondary prevention often depend on the ischemic stroke/TIA subtype. "Therefore, new in this guideline is a section describing recommendations for the diagnostic workup after ischemic stroke, to define ischemic stroke pathogenesis (when possible), and to identify targets for treatment in order to reduce the risk of recurrent ischemic stroke. Recommendations are now segregated by pathogenetic subtype," the guideline states.

Among the recommendations:

- Use multidisciplinary care teams to personalize care for patients and employ shared decision making with the patient to develop care plans that incorporate a patient's wishes, goals, and concerns.
- Screen for atrial fibrillation and initiate anticoagulant drug therapy to reduce recurrent events.
- Prescribe antithrombotic therapy, including antiplatelets or anticoagulants, in the absence of contraindications. The guideline notes that the combination of antiplatelets and anticoagulation is typically not recommended for preventing second strokes and that dual antiplatelet therapy (DAPT)--taking aspirin along with a second medication to prevent blood clotting--is recommended in the short term and only for specific patients: those with early arriving minor stroke and high-risk TIA or severe symptomatic stenosis.
- Consider carotid endarterectomy or carotid artery stenting for select patients with narrowing of carotid arteries.
- Aggressive medical management of risk factors and short-term DAPT are preferred for patients with severe intracranial stenosis thought to be the cause of first stroke or TIA.
- In some patients, it's reasonable to consider percutaneous closure of patent foramen ovale.

The guideline is accompanied by a systematic review and meta-analysis regarding the benefits and risks for dual antiplatelet vs single antiplatelet therapy for secondary stroke prevention.^[2] The authors conclude that DAPT may be appropriate for select patients.

"Additional research is needed to determine the optimal timing of starting treatment relative to the clinical event; the optimal duration of DAPT to maximize the risk-benefit ratio; whether additional populations excluded from POINT and CHANCE [2 of the trials examined], such as those with major stroke, may also benefit from early DAPT; and whether certain genetic profiles eliminate the benefit of early DAPT," conclude the reviewers, led by Devin Brown, MD, from the University of Michigan, Ann Arbor, Michigan.^[3,4]

The guideline was prepared on behalf of and approved by the AHA Stroke Council's Scientific Statements Oversight Committee on Clinical Practice Guidelines. The writing group included representatives from the AHA/ASA and the American Academy of Neurology (AAN).

The guideline has been endorsed by the American Association of Neurological Surgeons/Congress of Neurological Surgeons and the Society of Vascular and Interventional Neurology. It has also been affirmed by the AAN as an educational tool for neurologists.

Stroke. Published May 24, 2021.

Study Highlights

- In secondary stroke prevention, management of vascular risk factors remains crucial.
- Such risk factors include diabetes, smoking cessation, lipids, and especially hypertension.
- Multidisciplinary teams are often best for intensive medical management.
- Treatment goals should be tailored to the individual patient.
- For secondary stroke prevention, healthy diet, physical activity, and other lifestyle factors are important.
- Low-salt and Mediterranean diets are recommended to lower stroke risk.
- Exercise recommendations are for at least moderate-intensity aerobic activity for 10 minutes or longer 4 times weekly or vigorous-intensity aerobic activity for 20 minutes or longer twice weekly.
- As patients with stroke are especially at risk for sedentary behavior and prolonged sitting, they should be encouraged to safely participate in supervised physical activity.

- Simple advice or a brochure from the clinician is often insufficient to improve diet, exercise, medication compliance, and other patient behaviors.
- Programs using theoretical models of behavior change, proven techniques, and multidisciplinary support are therefore needed.
- Nearly all patients without contraindications should receive antithrombotic therapy, including antiplatelet or anticoagulant agents.
- The combination of antiplatelets and anticoagulation is typically not indicated for secondary stroke prevention, with very few exceptions.
- Long-term DAPT is not recommended.
- Even in the short term, DAPT is recommended only for very specific patients, including those with early arriving minor stroke and high-risk TIA or severe symptomatic intracranial stenosis.
- The subtype of ischemic stroke/TIA often determines specific recommendations for prevention strategies.
- The guideline therefore includes a new section describing recommendations for diagnostic workup after ischemic stroke, to identify ischemic stroke etiology whenever possible, and to identify treatment targets to lower risk for recurrent ischemic stroke.
- Recommendations are now grouped by etiologic subtype.
- When feasible, diagnostic workup to identify the cause of a first stroke or TIA should be completed within 48 hours after symptom onset.
- Atrial fibrillation remains a common, high-risk condition for second ischemic stroke.
- Anticoagulation is usually recommended for patients with atrial fibrillation and without contraindications.
- If no other cause of stroke is identified, heart rhythm monitoring for occult atrial fibrillation is usually recommended.
- Extracranial carotid artery disease is an important, treatable cause of stroke.
- Patients with severe stenosis ipsilateral to a nondisabling stroke or TIA who are candidates for intervention should have the stenosis fixed relatively early after their ischemic stroke.
- Specific patient comorbidities and vascular anatomy should help decide between carotid endarterectomy and carotid artery stenting.
- Patients with severe intracranial stenosis in the vascular territory of ischemic stroke or TIA should have aggressive medical management of risk factors and short-term DAPT, rather than angioplasty and stenting, as first-line treatment to prevent recurrence.
- Since the previous guideline in 2014, several studies have assessed secondary stroke prevention of patent foramen ovale closure.
- It is now considered reasonable to close patent foramen ovale percutaneously in selected patients: younger patients with nonlacunar stroke or patients of any age with no other identified cause.
- Patients with embolic stroke of uncertain source should not be treated empirically with anticoagulants or ticagrelor, which was found to be of no benefit.

Clinical Implications

- In secondary stroke prevention, management of vascular risk factors remains crucial.
- The subtype of ischemic stroke/TIA often determines specific recommendations for prevention strategies.
- Implications for the Health Care Team: For secondary stroke prevention, healthy diet, physical activity, and other lifestyle factors are important.

Earn Credit

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