

Editors' Note: The letters by Khoo and Armstrong agree that future studies and guidelines should address the periprocedural management of novel anticoagulant agents (e.g., direct thrombin inhibitors and factor Xa inhibitors) in patients with ischemic cerebrovascular disease. Commenting on the article by Mehndiratta et al. on the challenges of stroke in India, Sharma stresses the importance of including emergency medical services in stroke management in India. Furthermore, Sethi mentions the negative lifestyle changes that young Indians are undergoing and suggests improving national health policies to further prevent and treat stroke.

-Chafic Karam, MD, and Robert C. Griggs, MD

SUMMARY OF EVIDENCE-BASED GUIDELINE: PERIPROCEDURAL MANAGEMENT OF ANTITHROMBOTIC MEDICATIONS IN PATIENTS WITH ISCHEMIC CEREBROVASCULAR DISEASE: REPORT OF THE GUIDELINE DEVELOPMENT SUBCOMMITTEE OF THE AMERICAN ACADEMY OF NEUROLOGY

Kah Fang Khoo, Bayan Lepas, Malaysia: This guideline is especially helpful in my daily management of patients.1 Patients taking warfarin come to my clinic to obtain referrals for dental extraction because most dental surgeons in Malaysia refuse to perform dental procedures without clearance. I agree with the continuation of warfarin during dental procedures but certain precautions should be taken. Oral surgery may be completed safely at international normalized ratios (INRs) of 1.5-2.52 and up to INR 4 for a small procedure.3 The INR should be checked prior to surgery. For simple extractions, bleeding should be controlled by minimizing surgery to only one site, and postoperative packs or firm sutures should cover the wound. Local anesthetic should be given cautiously to avoid venipunctures.4 I hope a future guideline will address novel anticoagulant therapy for use during dental procedures.

Author response: Melissa J. Armstrong, Baltimore, MD; José Biller, Chicago, IL; Larry B. Goldstein, Durham, NC; Michael Schneck, Maywood, IL; Steven R. Messé, Philadelphia, PA: We appreciate Dr. Khoo's comments and are pleased that the guideline will be useful in daily patient management. We agree

that it is reasonable to consider the degree of anticoagulation when continuing warfarin periprocedurally to reduce bleeding risks. However, because of differences in approach between studies, we were unable to make recommendations regarding target INRs when anticoagulation is continued or optimal timing when agents are discontinued. We did not find studies formally investigating INR or timing strategies. Review articles and consensus statements such as those referenced propose approaches that are reasonable for clinicians to consider when making these decisions, but high-quality studies evaluating the best approach are not available. Studies evaluating periprocedural management strategies for newer anticoagulants such as oral direct thrombin inhibitors and factor Xa inhibitors will be important for informing future guidelines with regard to the perioperative management of stroke patients.

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  antithrombotic medications in patients with ischemic cerebrovascular disease: report of the Guideline Development
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### MEETING THE CHALLENGES OF STROKE IN INDIA

Mohit Sharma, Brooklyn, NY: I agree with Mehndiratta et al., who outlined concerns about stroke in India. India needs to invest more in stroke research and to develop adequate stroke infrastructure for its 1.2 billion citizens. Progress is being made by the Indian Stroke Association (ISA) and the recent launch of the Indian Stroke Registry. However, the authors missed the importance of emergency medical services (EMS). The American Heart Association/American Stroke Association guidelines for the management of adults with ischemic stroke include the role of EMS in the stroke chain of survival. Early stroke detection, EMS dispatch,

and patient delivery to a designated center are critical in stroke management. Currently, India lacks an organized EMS that can provide a fast and responsive service in urban as well as rural India. It is not enough to strengthen the stroke infrastructure if patients cannot be transported within the treatment window for tissue plasminogen activator (tPA). A coordinated participation of EMS and public and private hospitals as well as increased levels of stroke awareness among the masses are required to optimize stroke management in India.

Nitin K. Sethi, New York, NY: Mehndiratta et al. commented on stroke in the Indian subcontinent.1 One of the major challenges facing Indian neurologists is stroke in the young. Economic reforms implemented by the Indian government over the past decade have led to rapid urbanization of the Indian population. This has created socioeconomic disparities and also prompted changes in diet and lifestyle in the young urban Indian. Alcohol consumption, smoking, and tobacco chewing are on the rise among men and women. These concerns added to the transition to fast foods, a stressful lifestyle, and lack of exercise has created a stroke epidemic in the young in India. Halting this silent stroke epidemic will require concerted efforts from the national government and Indian neurologists under the aegis of the ISA and the Indian Academy of Neurology. Framing a national health policy supporting the objectives of timely identification and modification of stroke risk factors would be an important first step. Bringing modern stroke care to small towns and villages across India is neither realistic nor practical in a country where health resources are still scarce and infectious diseases such as malaria and cholera and nutritional disorders exist.

Author response: Man Mohan Mehndiratta, New Delhi, India; Aneesh Singhal, Boston; Seemant Chaturvedi, Detroit; MR Sivakumar, Chennai, India; Majaz Moonis, Worcester, MA: We agree that efforts to improve stroke care in India must proceed on multiple fronts, as suggested by

Drs. Sethi and Sharma. The ISA is emphasizing both prevention and acute stroke treatment. Improvements in EMS are critical not only for stroke but also for other emergent conditions such as serious infections, myocardial infarction, and trauma. Urbanization of young adults is also a cause for concern, and national stroke registries, which have been started by ISA members, should be able to address the significance of this problem. Feigin et al.<sup>3</sup> systematically analyzed the worldwide trends in stroke incidence and mortality and reported a 42% decrease in stroke incidence in high-income countries but a more than 100% increase in low- to middle-income countries. My study also addressed the epidemiology of stroke and recent trends.<sup>4</sup>

The Ministry of Health of India has adopted a National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS). This policy will lessen the burden of noncommunicable disorders and enhance the facility for emergency services for stroke.<sup>5</sup> Some of the state governments like Delhi and Tamilnadu provide free tPA in their public tertiary care hospitals.

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#### **CORRECTION**

#### Skin sympathetic fiber $\alpha$ -synuclein deposits: A potential biomarker for pure autonomic failure

In the article "Skin sympathetic fiber  $\alpha$ -synuclein deposits: A potential biomarker for pure autonomic failure" by V. Donadio et al. (*Neurology*® 2013;80:725-732), there is an error in the unit of measure in 2 column headings in table 2. The first heading under Leg and Thigh indications for the ENF patients should have read, "ENF (PGP-ir), mm." The authors regret the error.



# Meeting the challenges of stroke in India

Mohit Sharma, Man Mohan Mehndiratta, Nitin K. Sethi, et al. *Neurology* 2014;82;95-96 DOI 10.1212/01.wnl.0000442494.46850.f1

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