

# EMS Called Key in Early Stroke Management

BY JEFF EVANS  
Senior Writer

Emergency medical services can play a key role in assessing and routing acute ischemic stroke patients to intravenous thrombolytic therapy stroke centers, according to updated American Heart Association and American Stroke Association guidelines for the early management of adult patients with the condition.

"For the first time, we have included recommendations for emergency medical services" to use brief stroke identification algorithms—such as the Los Angeles Prehospital Stroke Screen or the Cincinnati Prehospital Stroke Scale—to begin stroke management in the field with established stroke protocols, and to take patients to centers where there are adequate treatment resources, Dr. Harold P. Adams Jr., chair of the 16-member writing panel, said in an interview.

"One of the things that we would like EMS to do ... is to bypass those hospitals that do not have the resources to take care of a patient with stroke. This does not mean that [the patient] has to go to a big, tertiary, academic medical center. Our hope is that some of these patients can be successfully treated in community hospitals," Dr. Adams said.

The panel strongly recommended the creation of primary stroke centers that have "the personnel, programs, expertise, and infrastructure to care for many patients with uncomplicated strokes, [use] many acute therapies (such as intravenous rtPA [recombinant tissue plasminogen activator]), and [admit] such patients into a stroke unit" (Stroke 2007; 38:1655-711).

More specialized comprehensive stroke centers also could be developed "to care for patients with complicated types of strokes, patients with intracerebral hem-

orrhage or subarachnoid hemorrhage, and those requiring specific interventions ([such as] surgery or endovascular procedures) or an intensive care unit type of setting."

Both types of centers could be certified by an external body, such as the Joint Commission on Accreditation of Healthcare Organizations, according to the panel.

The updated guidelines still strongly endorse the administration of IV rtPA within the first 3 hours of onset of stroke, which "remains the engine that's driving acute stroke care," said Dr. Adams, professor of neurology and director of the division of cerebrovascular disorders at

**The creation of primary stroke centers with the personnel, programs, expertise, and infrastructure to care for patients with uncomplicated strokes is strongly recommended.**

the University of Iowa, Iowa City.

The panelists expanded the eligibility of patients for rtPA in noting that it may be okay for patients who had a seizure at the onset of a stroke to receive the treatment "as long as the physician is convinced that residual impairments are secondary to stroke and not a postictal phenomenon."

Other IV therapies were not recommended outside of a clinical trial.

Intra-arterial thrombolytics garnered support from the panel only in specific circumstances in patients who are not candidates for IV rtPA. Such agents should be administered only at "experienced stroke centers with immediate access to cerebral angiography and qualified interventionalists," the guidelines noted.

Endovascular interventions with the Food and Drug Administration–approved Merci device were considered to be reasonable in the treatment of "carefully se-

lected patients." But it was noted that further study of the device in clinical trials is needed to define its role in the emergency management of stroke because its utility in "improving outcomes after stroke is unclear."

Although the guidelines continue to recommend CT or MR imaging for diagnosis, the panelists advised physicians not to delay emergency treatment in order to obtain multimodal CT or MR imaging or vascular imaging in patients whose symptoms started fewer than 3 hours before and who have acute ischemic stroke. Chest x-rays also are not considered necessary for the initial evaluation of most stroke patients.

It is now advised that antihypertensive medications be restarted around 24 hours after the stroke in patients who have preexisting hypertension and are neurologically stable, unless there is a specific contraindication to doing so. Vasopressors may be used to improve cerebral blood flow in "exceptional cases," but their usage requires close neurologic and cardiac monitoring.

The previous, "rather liberal" guidelines for controlling blood glucose levels have been changed to a lower minimum threshold for treatment, Dr. Adams pointed out.

Blood glucose concentrations of more than 140 mg/dL to 185 mg/dL "probably should trigger administration of insulin," followed by "close monitoring of glucose concentrations with adjustment of insulin doses to avoid hypoglycemia," according to the guidelines.

The panel also voiced concern about the need for palliative care in some patients. "There are some patients who are so devastated by stroke, even acutely, that we do not have much to offer. We do need to remember that there are some patients who warrant and deserve palliative care," Dr. Adams said. ■

# Post-TIA Combo Of Dipyridamole, Aspirin Is Better

MAUI, HAWAII — A large international study showed aspirin plus dipyridamole worked better than aspirin alone in preventing a major vascular event following a transient ischemic attack or a minor stroke of arterial origin, Dr. Gregory W. Albers said at a symposium on emergency medicine sponsored by Stanford School of Medicine.

The recent European/Australasian Stroke Prevention in Reversible Ischaemia Trial (ESPRIT) was a randomized, open-label study of 2,739 patients who had experienced nondisabling cerebral ischemia of presumed arterial origin, said Dr. Albers, who is professor of neurology and neurological sciences and director of the Stanford Stroke Center, Stanford (Calif.) University Medical Center.

The ESPRIT designers wanted to know whether a combination of aspirin (30-325 mg) plus dipyridamole (200 mg b.i.d.) was better than aspirin (30-325 mg) alone at preventing the primary outcome of stroke, myocardial infarction, major bleeding events, or death from vascular causes (Lancet 2006;367:1665-73). Average patient follow-up was 3.5 years.

There was a statistically significant 20% risk reduction for the combination therapy, he said. "Not only were there fewer strokes, but there were fewer cardiac events," he said.

"For whatever reason, bleeding doesn't seem to be such an issue, probably because dipyridamole is not much of an antiplatelet agent," he added. "You don't get the same long-term bleeding effects with dipyridamole and aspirin as you get with clopidogrel and aspirin."

The Netherlands-based study was a secondary stroke prevention trial not funded by a drug company.

—Greg Muirhead

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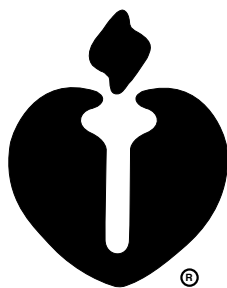
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