

Aspirin within two days of ischemic stroke reduces deaths

DALLAS, July 9 – Giving patients aspirin within 48 hours of the onset of an acute ischemic stroke can reduce death and severity of stroke, according to a joint scientific statement from the American Stroke Association and the American Academy of Neurology.

An ischemic stroke is caused by a blood clot and is the most common type of stroke.

The statement, published in the July issues of *Stroke: Journal of the American Heart Association*, and *Neurology*, the scientific journal of the American Academy of Neurology, aims to define the roles of drugs such as aspirin – which is in a class of drugs called antiplatelet agents that prevent blood clot formation – and drugs such as heparin, a type of anticoagulant that slows blood clotting.

The authors conducted a systematic review of the literature, looking primarily for well-designed, large prospective studies in which patients were randomly selected and blinded (they didn't know what type of therapy they were receiving).

They found evidence from the published trials that giving 160 – 325 mg of aspirin within 48 hours of stroke onset offers a “small but statistically significant” decrease in death rates and disability from stroke. Recommendations on the use of other types of antiplatelet agents, such as clopidogrel and ticlopidine within the first 48 hours of onset could not be made due to insufficient data.

Conversely, anticoagulants have not been shown to reduce death or disability when used within 48 hours.

“There is some evidence that a fixed dose of heparin **given subcutaneously might be helpful for preventing recurrent stroke, but the benefit is** balanced against the complication of increased hemorrhage. With the net effect, there is no benefit to that treatment. Therefore, we are not recommending that one use a fixed dose of heparin given subcutaneously **to prevent stroke recurrence,**” says neurologist Bruce Coull, M.D., chair of the Joint Stroke Guideline Development Committee.

In a second major recommendation, the authors note that **subcutaneous** heparin should be considered to prevent deep-vein thrombosis in some at-risk patients. Deep-vein thrombosis is a potentially life-threatening disorder in which blood clots form in the deep veins in the body, particularly the legs.

“Presumably by giving heparin to prevent clotting in the veins, you decrease the likelihood that clots will travel to the lungs and cause a pulmonary embolism,” he says. “One of the ways that people can die from a complication of stroke is by pulmonary embolism.

“These results emphasize the importance of reviewing all the evidence to develop practice guidelines,” says Coull, professor and head of the department of neurology and professor of medicine, University of Arizona, Arizona Health Science Center in Tucson. “Despite decades of use and physiologic reasons for its use, there were surprisingly few randomized trials that addressed the effects of using heparin and other anticoagulants within a few hours of onset of symptoms.”

The report should have a three-fold effect on clinical practice, says Coull. “We would hope that most acute ischemic stroke patients will receive antiplatelet therapy; that for every patient with acute stroke the issue of deep-vein thrombosis is addressed – whether heparin is used or not; and thirdly, that heparin be used sparingly in this setting unless there is a good rationale for using it.”

More well-designed studies on the use of other antiplatelet drugs and anticoagulants are warranted, according to the writing group.

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