

Adding uric acid to standard stroke clot busters reduces stroke disability

February 13 2014

Giving stroke patients uric acid along with standard clot-busting medication within 4.5 hours of first symptoms appears safe and effective at limiting disability, according to late-breaking science presented at the American Stroke Association's International Stroke Conference 2014.

In a study of 421 [acute stroke patients](#), nearly 40 percent treated with uric acid and clot busters were relatively free of disability at 90 days compared to 33 percent of patients treated with a placebo. Uric acid produced the greatest benefits for women and patients with [high blood sugar](#) and moderate stroke.

High levels of uric acid in the blood can lead to serious medical illness including kidney stones or the inflammatory arthritic condition known as gout and has been linked with heart and vascular problems and diabetes.

However, animal studies have shown that adding uric acid to brain cells protected the cells from stroke-related damage.

"When used in stroke, uric acid is a firefighter, not an arsonist," said Angel Chamorro, M.D., Ph.D., study author and director of the Comprehensive Stroke Center, at Hospital Clinic in Barcelona, Spain. He said extensive research in patients and in animals found that a higher level of uric acid in acute [stroke patients](#) was associated with better recovery.

"That was kind of surprising because everyone knows uric acid has a

pretty bad reputation because it is associated with gout attacks, renal problems and perhaps also with cardiovascular disease,' he said. "But what people do not know so well is that uric acid is an extremely potent antioxidant, which is it prevents the formation of free radicals that can result when a brain artery is blocked."

Researchers suggest that uric acid may have a greater role in regulating human health and is a possible new approach to managing acute stroke. Chamorro noted that the study may explain why women have more disability after stroke than men.

"We believe women are less equipped to combat oxidative stress as the result of their lower uric acid levels," he said

Half of patients in the study were women and the average age of all patients was 76. Most had other medical conditions and were treated at 10 [stroke centers](#) around Spain. All patients received the anti-clotting drug [tissue plasminogen activator](#) (tPA) and were randomly assigned to receive uric acid or a placebo. Sixty patients died.

While the study group was small and the results will need validation in larger trials, Chamorro said the study's strength is that it involved elderly patients who had more serious strokes and other health problems.

"We may need to acknowledge that there's promise for [uric acid](#) in patients with acute [stroke](#) treated with a clot buster within 4.5 hours of symptoms onset," Chamorro said. "The results of this trial are exciting and offer new hope in a field that was full of failures."

Provided by American Heart Association

Citation: Adding uric acid to standard stroke clot busters reduces stroke disability (2014,

February 13) retrieved 25 April 2024 from <https://medicalxpress.com/news/2014-02-adding-uric-acid-standard-clot.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.