

# Early blood pressure reduction to improve stroke outcomes

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Early and intensive lowering of high blood pressure has shown promising effects in stroke patients, according to results of a new stroke study by The George Institute for International Health.

Initial results of the first large-scale investigation into managing raised blood pressure after intracerebral haemorrhage (stroke) demonstrates that rapid blood pressure lowering is well tolerated and appears to reduce the amount of bleeding in the brain, indicating that such treatment could reduce the risk of death and disability in stroke patients.

“These results show that drug treatment to lower elevated blood pressure can be given quickly and safely to patients with intracranial haemorrhage,” said Professor Craig Anderson from The George Institute, who outlined results today at the American Heart Association’s International Stroke Conference in New Orleans. “Furthermore, this treatment appears to limit bleeding in the brain in this type of stroke, which may improve chances of recovery for patients.”

Intracerebral haemorrhage (ICH) is the most serious type of stroke that results from rupture of a blood vessel within the brain. This is often the result of high blood pressure and affects over one million people around the world each year. Over one third of patients die early after the onset of ICH and most survivors are left permanently disabled. The aims of the vanguard, or pilot study, were to determine the feasibility and safety of rapid lowering of elevated blood pressure to more ‘normal’ levels after the onset of ICH, and also test whether the treatment reduces the amount of bleeding in the brain.

The results challenge current international guidelines for the management of blood pressure in stroke, which tend to indicate that high blood pressure is dangerous but are uncertain about either the level at which to commence or cease

such treatment. Professor Anderson explained that currently there is wide variation in the use of blood pressure lowering as acute treatment for stroke around the world.

The INTERACT (The INTensive blood pressure Reduction in Acute Cerebral haemorrhage Trial) vanguard phase recruited 404 patients from 44 hospitals in Australia, China and South Korea from November 2005 to April 2007. Patients who presented within six hours of onset of ICH and with acutely elevated blood pressure or ‘hypertension’, were randomised to receive either a treatment strategy of rapid blood pressure lowering or the more conservative, American Heart Association guideline-based blood pressure lowering. Patients were followed-up to assess their response to treatment, degree of recovery and changes in brain scans.

“Despite the magnitude of the burden imposed by this disease, and the high cost to health services, there is no widely available treatment for the condition. However, early rapid blood pressure lowering shows considerable promise as a widely applicable, cost-effective therapy that can be readily incorporated into clinical practice,” noted Professor Anderson.

Professor Anderson said that this hypothesis will be tested in a much larger, main phase to INTERACT in some 2,000 patients with ICH, commence later this year. The study is funded by the National Health and Medical Research Council of Australia.

Source: Research Australia

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