

Two simple tests could help to pinpoint cause of stroke

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A blood clot forming in the carotid artery. Credit: American Heart Association

Detecting the cause of the deadliest form of stroke could be improved by a simple blood test added alongside a routine brain scan, research suggests.

Combining the [test](#) with a brain scan could provide key genetic information that may help identify those most at risk from a second [stroke](#), doctors say.

Experts say the new approach could revolutionise the way doctors manage strokes caused by bleeding in the brain, known as intracerebral haemorrhage (ICH).

ICH accounts for up to 50 per cent of all strokes worldwide. Around half of those affected die within one year.

Researchers used the [blood test](#) and brain scan images to detect a condition known as cerebral amyloid angiopathy (CAA), which can cause ICH and is linked to a higher risk of further strokes and dementia.

CAA is caused by a build-up of a protein known as amyloid in the walls of [blood](#) vessels in the brain.

University of Edinburgh researchers used computed tomography (CT) scans in more than 100 patients who died following their first ICH. They collected blood samples to test a gene called APOE, which is linked to CAA.

By combining simple CT scan images with a genetic blood test, researchers could accurately spot if an ICH had been caused by CAA.

This new approach could help identify people who are at higher risk after their ICH, scientists say.

It could also improve ICH diagnosis in developing countries as CT scanning and blood testing is available worldwide.

Dr Mark Rodrigues, Wellcome Trust Clinical PhD Programme Fellow at

the University of Edinburgh, said: "Identifying the cause of a [brain](#) haemorrhage is important to planning patient care. Our findings suggest that the combination of routine CT scanning with APOE gene testing can identify those whose ICH has been caused by CAA - a group who may be more at risk of another ICH or dementia."

The study is published in *Lancet Neurology* and was funded by the Medical Research Council, Stroke Association and Wellcome Trust.

More information: *Lancet Neurology* (2018). [DOI: 10.1016/S1474-4422\(18\)30006-1](#)

Provided by University of Edinburgh

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