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Brain scan checklist set to boost care for stroke survivors

People who suffer a stroke caused by bleeding in the brain could be helped by four simple checks of their brain scans, research suggests.

The checks could help spot people at risk of further bleeding so they can be monitored more closely.

Experts say this could help improve outcomes for the millions of people around the world who experience a brain bleed each year.

Bleeding in the brain – known as an intracerebral haemorrhage or ICH – is the most deadly form of stroke.

Only one in five patients survives without permanent damage. Of the remainder, half are likely to die within a month and half will be left with a long-term disability.

Cases of ICH are diagnosed by brain scans, but until now it has been difficult to predict which patients will continue bleeding. Those who do are expected to have worse outcomes.

Research led by the University of Edinburgh analysed data from studies around the world involving more than 5,000 patients.

The team identified four factors that helped doctors predict whether patients were likely to experience further bleeding.

These include the size of the bleed and whether or not the patient was taking medication, such as aspirin or warfarin, to thin their blood or prevent clotting.

Experts say the checks can be applied during routine care to help medical staff decide the best way to continue monitoring each patient.

Researchers also looked at the benefit of an advanced brain scanning technique – called CT angiography – for predicting a person's risk of ongoing bleeding.

The scan involves injecting a coloured dye into the patient's bloodstream and checking if it can be seen leaking into the brain.

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For patients who showed leakage of the dye, the test was of little value in addition to the four simple checks for predicting their risk of ongoing bleeding, researchers found.

Incorporating the four checks into patient care could help to improve survival, especially in low or middle-income countries, where patients may not have access to CT angiography.

Experts from dozens of research centres worldwide contributed to the study, which is the largest of its kind to date.

The research, published in *The Lancet Neurology*, was funded by the UK's Medical Research Council and the British Heart Foundation.

Professor Rustam Al-Shahi Salman, of the University of Edinburgh's Centre for Clinical Brain Sciences, said: "We have found that four simple measures help doctors to make accurate predictions about the risk of a brain haemorrhage growing. These can be used anywhere in the world. Better prediction can help us identify which patients might benefit from close monitoring and treatment. We hope that an app could help doctors to do this. The next step is to find an effective treatment to stop the bleeding."

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