



Can Severe Stress Cause Stroke?

ScienceDaily (Oct. 2, 2009) — Many patients urgently admitted to hospital with cerebral infarction state that they were under great stress over a prolonged period prior to suffering their stroke, is shown in a unique patient study conducted in cooperation between the Sahlgrenska Academy at the University of Gothenburg and Sahlgrenska University Hospital, Sweden.

"There appears to be a correlation between stress and stroke, but this needs to be interpreted with great caution. We asked about self-perceived stress among the stroke patients, and there is, of course, a risk of patients who have just had a cerebral infarction remembering incorrectly or over-interpreting with regard to their level of stress, says Katarina Jood, who is a researcher at the Sahlgrenska Academy and a neurologist at Sahlgrenska University Hospital.

Nearly 600 patients were asked to complete a questionnaire in this study, no later than ten days after being admitted to Sahlgrenska University Hospital with acute cerebral infarction. In the questionnaire, the patients were asked to choose between six different alternatives to indicate how stressed they had felt before their stroke, from "never been stressed" to "constantly stressed over the past five years". The patients' responses were compared with a healthy control group who were asked the same question.

"We found an independent link between self-perceived psychological stress and stroke. A new finding was that the link between stress and stroke varies between different types of cerebral infarction," says Jood.

The study shows that there is a link to stress in those cases where the stroke is caused by atherosclerosis or to blood clots that have developed locally in the smaller vessels of the brain. The link was also found for those patients in whom it had not been possible to establish the cause of the stroke despite an extensive evaluation. On the other hand, the researchers could not see any independent correlation with stress for those patients who had had a stroke due to a blood clot from the heart.

"We do not know why stress appears to play a greater role in particular types of stroke, but it is an important finding as it prompts further studies on what role stress plays in the development of stroke," says Jood.

About Stroke

Stroke is due in 85 per cent of cases to cerebral infarction ('ischaemic stroke') and in 15 per cent of cases to brain haemorrhage. The patient may suffer from impaired mobility, sensory impairment and difficulty in thinking and speaking. Stroke is the most common cause of long-term dependency on care.

Journal reference:

1. Katarina Jood et al. **Self-perceived psychological stress and ischemic stroke: a case-control study.** *BMC Medicine*, 2009, 7:53; October 2009 DOI: [10.1186/1741-7015-7-53](https://doi.org/10.1186/1741-7015-7-53)

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