

# Dual treatment for stroke leads to improved recovery rates, reduced mortality

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It appears that stroke patients who receive both intravenous thrombolysis – a minimally invasive treatment that dissolves abnormal blood clots – and endovascular interventions – such as drugs and implanting medical devices – are much more likely to recover and have lower chances of dying, according to new research by the Zeenat Qureshi Stroke Research Center at the University of Minnesota Medical School.

Between 2003 and 2006, 33 consecutive patients with acute ischemic stroke –which occurs when a blood clot blocks an artery in the brain – were treated with thrombolysis in combination with endovascular interventions, which includes low doses of clot-fighting drugs and medical procedures such as angioplasty. The study looked at the outcomes of consecutive patients from a tertiary stroke facility where endovascular treatment was routinely available for patients treated with intravenous thrombolysis. Outcomes were compared with a control cohort of 30 consecutive patients treated with thrombolysis at a comparable facility where endovascular interventions were not available.

Researchers found that the group that received both therapies experienced significantly lower mortality at 90 days (about 12 percent compared with 40 percent) with a significantly greater improvement in neurological ability by the time of discharge or follow-up. Patients younger than 80 years old showed the greatest improvement, with significant improvement in neurological deficits prior to treatment at the time of stroke.

The results were published in a recent issue of the American Journal of Neuroradiology.

"In theory it made sense to administer both treatments, but this is the first time we have the data to support the therapeutic benefit of such an approach," said Adnan I. Qureshi, M.D., executive director of the Stroke Initiative and Center at the

University of Minnesota. "This is objective data to support the benefit of combination of intravenous thrombolysis and endovascular treatments."

Since the introduction of thrombolysis in the mid-1990s to clinical practice, no other treatment has been proved to further improve the clinical outcomes in patients with ischemic stroke – which is why this study is important, Qureshi said.

Since both thrombolysis and additional endovascular treatments are not available at all medical centers, Qureshi said the bigger implications of this study support the creation of specialized stroke centers – or designated stroke hospitals – for patients who have suffered a stroke so they can receive better care.

Source: University of Minnesota

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