STROKE

Faster clot busting gets good results

Time is of the essence for patients whose stroke is due to arterial occlusion. A new report shows that the currently recommended first-line treatment, intravenous alteplase, which breaks down arterial blood clots, results in better clinical outcomes if it is backed up by intra-arterial alteplase and thrombectomy, as this approach achieves recanalization sooner rather than later. “The sooner the recanalization, the higher the number of patients who recover completely from their ischemic stroke at 3 months,” notes senior author Pierre Amarenco (Bichat University Hospital, Paris, France).

Mikael Mazighi and colleagues, reporting on behalf of the Recanalisation using Combined Intravenous Alteplase and Neurointerventional Algorithm for acute Ischemic Stroke (RECANALISE) investigators, report that a systemic intravenous–endovascular approach allowed recanalization in 87% of patients

with ischemic stroke with confirmed intracranial arterial occlusion, compared with 55% treated with intravenous alteplase only. If recanalization occurred within 3.5 h of the first appearance of symptoms, 93% of patients had recovered completely at 3 months. With every 30 min delay to recanalization, the cure rate at 3 months dropped by 20%.

“The sooner the recanalization, the higher the number of patients who recover...”

“This is the first demonstration that a totally integrated endovascular approach deployed in the stroke unit can increase recanalization rates, leading to a better clinical outcome,” comments Amarenco. He hopes that this finding will promote the integration of interventional neurology

into stroke units, just as interventional cardiology was integrated into cardiac intensive care units in the 1990s.

The next step will be to demonstrate that the endovascular approach can work well in multiple centers. “This is the purpose of the IMS [Interventional Management of Stroke] III trial, sponsored by the NIH in the US, in which patients are randomized to receive either the intravenous–endovascular approach or an intravenous tissue plasminogen activator only,” reports Amarenco. This represents a similar design to the RECANALISE trial, but is a fully randomized study; RECANALISE used historical controls only. “A positive outcome of the IMS III trial would substantiate our observations,” Amarenco concludes.

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Original article Mazighi, M. *et al.* Comparison of intravenous alteplase with a combined intravenous–endovascular approach in patients with stroke and confirmed arterial occlusion (RECANALISE study): a prospective cohort study. *Lancet Neurol.* 8, 802–809 (2009).