In this study, Vespa et al sought to determine the safety of endoscopic removal of intraparenchymal cerebral hematoma (ICH) in the acute phase of hemorrhage. To that end, the authors conducted a prospective, multicenter, randomized controlled trial in academic centers in the United States. Patients were included if they had a supratentorial ICH >20 mL. Patients were randomized to endoscopic surgery within 48 hours of the diagnosis of ICH, versus standard medical care. Patients with expanding hematomas were excluded. Routine imaging with head computed tomography was performed up to 7 days and at 30 and 180 days, and brain magnetic resonance imaging was done at day 7. Outcomes were assessed with the modified Rankin Scale from 30 days up to 1 year from ICH. In the surgical arm, endoscopic aspiration of the hematoma was performed until 75% to 80% of the hematoma was removed. The primary safety outcome was a composite of all-cause mortality, procedure-related mortality, bacterial brain infection, and symptomatic bleeding. The primary efficacy outcome was the 180-day dichotomized modified Rankin Scale (0–3 versus 4–6). Fourteen patients underwent the interventional procedure, 6 were randomized to the medical arm, and an additional 36 patients enrolled in the medical arm of the MISTIE trial (Minimally Invasive Surgery and r-tPA for ICH Evacuation) were included in the analysis. Surgery led to overall 71.2% reduction in hematoma volume, with significantly smaller hematoma volumes in the surgical arm at 72 hours. There were no differences in mortality and morbidity between the surgical and medical arms. Patients undergoing surgery had a nonsignificant higher proportion of favorable mRS (0–3) at 365 days when compared with the medical arm, with 12% likelihood of more favorable outcome at 1 year. The authors concluded that endoscopic removal of ICH is safe, feasible, reduces a large proportion of the ICH volume immediately, and may lead to more favorable long-term outcomes. See p 2749.

Uric Acid Therapy Prevents Early Ischemic Stroke Progression: A Tertiary Analysis of the URICO-ICTUS Trial (Efficacy Study of Combined Treatment With Uric Acid and r-TPA in Acute Ischemic Stroke)

In this study, Amaro et al report data from a prespecified analysis of the URICO-ICTUS trial (Efficacy Study of Combined Treatment With Uric Acid and r-TPA in Acute Ischemic Stroke). URICO-ICTUS was a phase 2b, double-blind, placebo-controlled clinical trial performed in multiple centers in Spain. Patients with acute ischemic stroke who received alteplase within 4.5 hours of stroke onset were randomized to receive 1000 mg of uric acid (UA) or placebo before the end of the infusion of alteplase. The study goal was to assess whether UA could prevent early ischemic worsening, defined as a 4-point increase in the National Institutes of Health Stroke Scale score within 72 hours of therapy, and not because of hemorrhage or new infarct. They also explored the interaction between collateral circulation, as seen on cranial computed tomographic angiography, and UA therapy. Four hundred and eleven patients were enrolled, of whom 211 received UA. Patients who received UA therapy had significantly less early ischemic worsening when compared with the placebo group (3% versus 9%; P=0.01). Among the 112 patients who underwent assessment of the collateral circulation, there was a positive interaction between higher collateral score and UA therapy in preventing early ischemic worsening. Furthermore, patients with good collaterals treated with UA had a lower incidence of early ischemic worsening as compared with controls (2% versus 15%; P=0.048). The authors postulate that this positive interaction could be because of optimal access of the neuroprotectant to its molecular targets via preserved collaterals. Although the initial study results of URICO-ICTUS did not show a clinical benefit of UA therapy, the authors believe that UA could still hold promise as a neuroprotectant for patients selected on the basis of good collateral score. We will await results of future studies with this novel approach to patient inclusion, possibly also relevant to other future acute neuroprotection trials. See p 2874.

First Year After Stroke: An Integrated Approach Focusing on Participation Goals Aiming to Reduce Depressive Symptoms

In this study, the authors tested the hypothesis that an integrated approach to facilitate goal achievement in the first year post stroke could lead to less poststroke depression. This is of particular importance because poststroke depression may hinder rehabilitation outcomes. Furthermore, recovery approaches focusing on activities felt to be of value to the stroke sufferer can improve their wellbeing and community reintegration. This was an Australian prospective, randomized controlled trial. Patients from a rehabilitation facility were enrolled if they had an ischemic or hemorrhagic stroke. Exclusion criteria included very short or very long rehabilitation stay and discharge to a high-level residential care facility. Of interest, patients with cognitive or language impairment were not excluded. Patients were enrolled and randomized to the study groups after discharge from the acute care rehabilitation hospital. In the intervention group, patients underwent clinical monitoring, received additional assistance with rehabilitation services, referrals, advice/information, review of progress, and identification of barriers to recovery. Patients were encouraged to develop self-management approaches to new issues. The primary outcome was the level of depression according to the Geriatric Depression Scale at 12 months. Over a period of 2 years, 54 patients received the intervention and 56 were controls. At 12 months, the proportion of participants with symptoms of depression in the intervention group (14.6%) was significantly lower than the proportion in the control group (34.8%; P=0.023), independent of other variables, including pharmacotherapy. With this novel study, the authors suggest that multimodal poststroke interventions, taking into account patients’ mood and limitations in social participation, could prove to be a useful additive approach to further recovery after stroke, and should be considered a part of routine poststroke management. See p 2820.
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