Multiple Infarcts Are Associated With Long-Term Stroke Recurrence and All-Cause Mortality in Cryptogenic Stroke Patients

In this study, the authors studied the association between radiological patterns of cryptogenic ischemic stroke (IS), patient characteristics, and clinical outcomes in a retrospective analysis of consecutive acute IS patients at a university hospital. Of 1338 acute IS, 272 were classified as cryptogenic, with patients’ mean age 72±13 years and 49% being women. On the basis of diffusion-weighted imaging findings, these patients were divided into subgroups: single lesions in one vascular territory (62.1%), scattered lesions in one vascular territory (14%), and multiple lesions in multiple vascular territories (23.9%). Two hundred and sixty-one patients were assessed for right to left cardiac shunting by transcranial Doppler or transesophageal contrast echocardiography. Patients were followed up for 3 years. In multivariate logistic regression analysis, higher D-dimer levels and right-to-left shunting were independently associated with presence of multiple ischemic lesions on diffusion-weighted imaging. Recurrent stroke occurred in 11% of patients. Patients with multiple diffusion-weighted imaging lesions were at a higher risk for recurrent stroke or recurrent stroke and all-cause mortality, than patients with single or scattered lesions (P<0.001). Furthermore, cortical or corticosubcortical infarcts were independently associated with combined clinical end points. The authors speculate that their findings might be because of the potential association of cryptogenic IS with aortic arch plaques and occult cancer. These interesting findings may have important implications to guide clinical investigations in cryptogenic IS. Hence, clinicians might consider ruling out aortic arch plaque, occult cancer, or patent foramen ovale when faced with cryptogenic stroke patients with multiple infarcts, given their potentially poorer long-term outcomes. See p 2209.

FABS: An Intuitive Tool for Screening of Stroke Mimics in the Emergency Department

In the current study, the authors sought to develop and validate a simplified scoring system to screen and stratify stroke mimics (SM) from acute ischemic stroke patients, for use by stroke clinicians. To that end, they used data from 2 separate stroke centers. The scale, called FABS (absence of Facial droop, negative history of atrial fibrillation, age <50, systolic Blood pressure <50 mm Hg at presentation, history of Seizures, and isolated Sensory symptoms without weakness at presentation), included variables associated with SM at ≥90% level in a regression model. Variables were absence of facial droop, negative history of atrial fibrillation, age <50 years, systolic blood pressure <150 mmHg, history of seizures, and isolated sensory deficit. Binary values (0 or 1) were allocated to each variable to determine the overall FABS score (sum of the individual variable values). The score was then validated at 2 independent tertiary stroke centers. Data on 784 patients were analyzed of which 41% had SM. Mean patient age was 58±15 years, 50% were men, and median admission National Institutes of Health Stroke Scale was 5. The higher the FABS score (ie, 5 or 6), the higher the likelihood of a SM. Using receiver-operating characteristic curves, FABS ≥3 showed 90% sensitivity (95% confidence interval, 86%–93%) and 91% specificity (95% confidence interval, 88%–93%). Of the FABS components, the absence of facial droop was the best predictor of SM, with sensitivity of 94% (95% confidence interval, 90%–98%) and moderate specificity of 71% (95% confidence interval, 68%–75%) for SM. Therefore, the authors advocate for the use of FABS in the emergency room setting to help screen patients with suspected acute ischemic stroke for advanced imaging, such as rapid sequence MRI. It is hoped that the score will be validated in additional studies to prove its use in acute stroke triage and management. See p 2216.

Use and Outcomes of Intravenous Thrombolysis for Acute Ischemic Stroke in Patients Aged ≥90 Years of Age

In this article, the authors sought to explore the current trends in intravenous (IV) tissue-type plasminogen activator (tPA) administration in the oldest old, using the Get With The Guidelines registry. They investigated the frequency and outcomes of IV-tPA administration in patients with extremely advanced age and the characteristics associated with treatment versus nontreatment in patients aged ≥90 years. Of 802,388 ischemic stroke patients, 67,713 were ≥90 years. IV-tPA use declined with increasing age. Furthermore, for patients arriving to the hospital within 2 hours of symptoms onset and without contraindication for thrombolysis, IV-tPA administration was significantly lower in those aged ≥90 years compared with younger patients (P<0.0001). Independent predictors of receiving IV-tPA for patients aged ≥90 years included white race, non-Hispanic race or ethnicity, arrival by emergency medical services, arrival during on hours, later calendar year, more severe neurological deficit, independently ambulatory before stroke, and having a lower international normalized ratio. Interestingly, more elderly women received IV-tPA as compared with younger women (74% of patients aged ≥90 years). Regarding outcomes, age ≥90 years was an independent predictor of less discharge to home, discharge to home or acute rehabilitation, ambulatory independence at discharge, but more frequent in-hospital mortality or hospice care. Age 90+ was also independently associated with more symptomatic intracerebral hemorrhage compared with the youngest age group (18–64 years), but not compared with patients aged 65 to 89. Therefore, this study highlights that in one of the largest growing population segments, IV-tPA administration is significantly lower than that in younger patients, while hemorrhagic complications do not seem to be significantly more common in the oldest old. Despite thrombolysis, clinical outcomes in patients ≥90 years are still poorer than that in younger patients, stressing the impact of advancing age and comorbidities in the long-term effects of stroke. See p 2347.
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