Copeptin for the Prediction of Recurrent Cerebrovascular Events After Transient Ischemic Attack: Results From the CoRisk Study

Copeptin is a stress hormone that has previously been shown to be associated with recurrent cerebrovascular events after transient ischemic attack (TIA). The ABCD2 (age, blood pressure, clinical features, duration, diabetes) score and the ABCD3-I (ABCD2 plus dual TIA) score both provide risk assessment for recurrent stroke after TIA. The current study aimed to determine the effect of copeptin in the prediction of recurrent cerebrovascular events (stroke or TIA) within 3 months of TIA. In their cohort, 28 of 302 (9.3%) patients had a recurrent cerebrovascular event within 3 months of TIA. There was no statistically significant difference in copeptin levels in patients with or without recurrent cerebrovascular events. A total of 11 patients had recurrent stroke within 3 months. Copeptin levels were >4× higher in patients with recurrent stroke in comparison with those without stroke. A 10-fold increase in copeptin was associated with an odds ratio of stroke of 3.39 after adjustment for the ABCD2 score. Copeptin increased the prognostic ability of the ABCD2 score in predicting recurrent stroke in 31.2% of patients. In sum, copeptin seems to represent a biomarker with strong prediction value for recurrent stroke after TIA. Further validating studies are needed. But at this time it seems to add in risk stratification of patient presenting with TIA. See p 2918.

Long-Term Outcomes After Combined Revascularization Surgery in Adult Moyamoya Disease

Moyamoya disease is an idiopathic condition of progressive occlusions of both internal carotid arteries with abnormal vascular networks. Controversy exists on the optimal revascularization procedure in adults with moyamoya disease. The authors of this study report on the outcomes of combined revascularization surgery (direct bypass between the superficial temporal artery and a cortical branch of the MCA and indirect bypass known as encephalodurogaleosynangiosis) done on 77 hemispheres in 60 patients. The clinical status of patients, as assessed by the modified Rankin Scale and the Karnofsky Performance Scale, improved until 6 months after surgery and stayed stable after that. The relative revascularization area significantly increased in the long-term compared with the short-term follow-up period. The cerebral blood flow as measured by single photon emission computed tomography improved significantly in the short-term compared with the preoperative period and remained stable after that. Perioperative cerebral infarcts occurred in 13% of cases. However, the long-term risk of stroke was low with the annual rates of symptomatic cerebral hemorrhage and infarction in the operated hemispheres as 0.4% and 0.2%, respectively. In sum, this study showed improvement in clinical, angiographic, and hemodynamic states after combined revascularization surgery in moyamoya disease. However, there is no comparative arm. And thus further study will most definitely be needed to best define the optimal surgical procedure in this patient population. See p 2983.

Early Deterioration After Thrombolysis Plus Aspirin in Acute Stroke: A Post Hoc Analysis of the Antiplatelet Therapy in Combination With Recombinant t-PA Thrombolysis in Ischemic Stroke Trial

Addition of aspirin within 90 minutes after intravenous thrombolysis (IVT) in acute ischemic stroke has previously been shown to increase the risk of symptomatic intracranial hemorrhage (SICH) while having no effect on 3-month functional outcome in the Antiplatelet Therapy in Combination With Recombinant t-PA Thrombolysis in Ischemic Stroke (ARTIS) trial. The authors explored a post hoc analysis on the effect of aspirin on early neurological deterioration (END). END was defined as ≥4 points on the National Institutes of Health Stroke Scale worsening <24 hours after IVT and further divided into SICH and cerebral ischemia. A total of 31 of 640 patients (4.8%) receiving early aspirin after IVT experienced END: 14 because of SICH and 17 because of cerebral ischemia. On univariate analysis, aspirin increased the risk of END because of SICH but not of END because of cerebral ischemia. After multivariate analysis, aspirin remained significantly associated with END because of SICH. In summary, this post hoc analysis of the ARTIS trial shows that early aspirin after IVT is associated with early neurological deterioration because of symptomatic intracranial hemorrhage and has no beneficial effect on early neurological deterioration because of cerebral ischemia. Although the available literature suggests that early aspirin after IVT in acute ischemic stroke is harmful, further study is needed as there may potentially be certain subgroups of patients with stroke who may benefit from its use. See p 3080.

Section Editor: Scott Silverman, MD
Stroke: Highlights of Selected Articles

Stroke. 2014;45:2855
doi: 10.1161/STROKEAHA.114.007187
Stroke is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2014 American Heart Association, Inc. All rights reserved.
Print ISSN: 0039-2499. Online ISSN: 1524-4628

The online version of this article, along with updated information and services, is located on the World Wide Web at:
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