In Focus

Spotlight on the August 19 Issue

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Meta-analysis in more than 17,900 cases of ischemic stroke reveals a novel association at 12q24.12 OPEN

The authors conducted a genome-wide association study (GWAS) of ischemic stroke cases and controls. This was expanded in a meta-analysis of multiple cohorts including 17,970 ischemic stroke cases and 70,764 controls. This article confirmed the observed ischemic stroke subtype associations between the *HDAC9* locus on chromosome 7p21 and large artery stroke, and between *PITX2* and *ZFHX3* loci at 4q25 and 16q22 and cardioembolic stroke from other smaller ischemic stroke GWAS.

See p. 678

From editorialists Heyer & Nyquist: "Unlike candidate gene studies, which compare SNPs associated with one or more predetermined genes, the GWAS approach is hypothesis-free and used as a tool of discovery."

See p. 672

Increased risk of stroke in patients with chronic kidney disease after recurrent hypoglycemia

This retrospective cohort study of patients with chronic kidney disease (CKD) with and without hypoglycemia assessed the risk of overall mortality and vascular events including stroke, coronary heart disease, and congestive heart failure in both groups. The authors found that hypoglycemia plays an important role in stroke and death in patients with CKD.

See p. 686

Clinical-pathologic study of depressive symptoms and cognitive decline in old age

In this longitudinal clinical-pathologic study, 1,764 older persons without cognitive impairment completed annual clinical evaluations for a mean of 7.8 years. The authors found that depressive symptoms were associated with cognitive decline over time but did not correlate with the transition from normal cognitive function to mild cognitive impairment or dementia. Depressive symptoms were not associated with neuropathologic features associated with Alzheimer disease or Lewy body dementia but may have demonstrated an association with ischemic changes at autopsy.

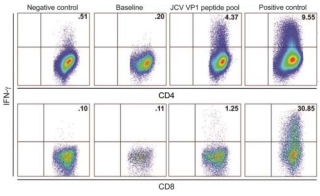
See p. 702

Motoric cognitive risk syndrome: Multicountry prevalence and dementia risk

This large prevalence study of a predementia syndrome included 26,000 participants from 22 cohorts based in 17 countries; 52% of the sample was from 6 low- and middle-income countries. Motoric cognitive risk syndrome was common and was associated with a 2-fold increased risk of cognitive decline. This approach can be applied to a variety of clinical settings to identify seniors at high risk for dementia.

See p. 718

JCV GCN in a natalizumab-treated MS patient is associated with mutations of the *VP1* capsid gene



The authors described a case of JC virus granule cell neuronopathy (JCV GCN) associated with natalizumab in a patient with multiple sclerosis (MS). JCV DNA was detected in the CSF and mutations were consistent with those found in GCN. JCV GCN should be considered as a possible etiology of a cerebellar syndrome in patients with MS treated with natalizumab.

See p. 727

Differential DNA methylation of the *D4Z4* repeat in patients with FSHD and asymptomatic carriers

Facioscapulohumeral muscular dystrophy is characterized by epigenetic alterations and a high interindividual and intrafamilial heterogeneity, making genotype-phenotype correlation challenging. Using different genetic approaches, the authors showed that changes in DNA methylation were associated with clinical signs, suggesting that epigenetics contributed to the clinical expression of the disease.

See p. 733; Editorial, p. 674

Convulsive status epilepticus and health-related quality of life in children with epilepsy

Convulsive status epilepticus (CSE) is a neurologic emergency and its effect on health-related quality of life (HRQL) in children is unclear. The findings suggested that children with CSE have poorer HRQL than their non-CSE counterparts and that this factor is independent of the effects of demographic and clinical features known to affect HRQL.

See p. 752

NB: Leaders of the NINDS, Walter Koroshetz and Story Landis, call for the promotion of basic neuroscience research in their editorial "Neurology's stake in foundational neuroscience research." See p. 670.

Podcasts can be accessed at Neurology.org

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