In Focus

Spotlight on the September 14 Issue

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Editor-in-Chief, Neurology®

Involvement of the human pedunculopontine nucleus region in voluntary movements



This paper investigated 7 patients with Parkinson disease who underwent deep brain stimulation electrode implantations in the pedunculopontine nucleus (PPN) region. Recordings showed that dopaminergic medications promote cortical and PPN interactions. Beta oscillations in the PPN have different functions and may explain why different frequencies are used for therapeutic stimulation of these structures.

See p. 950; Editorial, p. 944

Aortic stiffness and pulse wave reflection in young subjects with migraine: A case-control study

This case-control study showed that 60 patients with migraine had increased aortic stiffness and enhanced peripheral pressure wave reflection compared with 60 age-, sex-, and blood pressure-matched control subjects. This finding may represent one possible mechanism underlying the increased cardiovascular risk in patients with migraine.

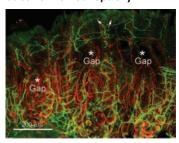
See p. 960; Editorial, p. 946

De novo mutations in ATP1A2 and CACNA1A are frequent in early-onset sporadic hemiplegic migraine

The authors investigated 25 patients with sporadic hemiplegic migraine with onset before age 16 who underwent familial genes screening; 76% had a mutation occurring de novo. These findings demonstrate that gene mutations were frequent in early-onset sporadic cases, especially when associated with ataxia, epilepsy, or developmental delay.

See p. 967

Gastric mucosal nerve density: A biomarker for diabetic autonomic neuropathy?



Mucosal biopsies were obtained during endoscopy from 15 healthy controls and 13 type I diabetic candidates for pancreas transplantation who had secondary diabetic complications, including a

diagnosis of gastroparesis. This study showed that gastric mucosal biopsy was a safe, practical method for histologic diagnosis of gastric autonomic neuropathy.

See p. 973



Widening gap in age at muscular dystrophy-associated death between blacks and whites, 1986-2005



Analysis of US death records indicated a significant increase in age-at-death among white males with muscular dystrophy (MD), but only a modest increase in African American males. Whether due to biological or social factors, it is important to identify and address the causes of this racial disparity to ensure optimal outcome for all patients with MD.

See p. 982

Editorial quote from Nicte I. Mejia and Rachel Nardin: "In neurology, we labor to save lives and preserve our patients' thinking, speech, and movement—the very essence of what it means to be human. Equitable access to neurologic care is a clinical and humanitarian imperative."

See p. 948

Cognitive activity and the cognitive morbidity of Alzheimer disease



This study assessed 1,157 older residents of a geographically defined population at 3-year intervals with brief cognitive performance tests from which a composite measure of global cognition was derived. Mentally stimulating activity in old age lessened the cognitive morbidity associated with Alzheimer disease.

See p. 990

Genomic biomarkers and cellular pathways of ischemic stroke by RNA gene expression profiling

Peripheral whole blood samples were collected from MRI-diagnosed acute ischemic cerebrovascular syndrome patients and 25 nonstroke control subjects ≥18 years of age. The authors found that the expression of 9 genes in the peripheral blood may be valuable for diagnosing ischemic stroke in the setting of confounders.

See p. 1009

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