In Focus

Spotlight on the June 3 Issue

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Strategic white matter tracts for processing speed deficits in age-related small vessel disease

Five hundred eighty-four elderly persons underwent brain MRI followed by segmentation of white matter hyperintensities. The location of white matter hyperintensities was assessed by voxel-based lesion-symptom mapping and graph-based models were used to assess lesion volumes in white matter tracts.

Vascular cognitive impairment was

influenced by the location of lesions.

See p. 1946; Editorial, p. 1940

Antemortem MRI findings associated with microinfarcts at autopsy

Patients with autopsy-confirmed microinfarcts had a higher frequency of macroinfarcts on antemortem MRI, suggesting shared risk factors or pathophysiology. Patients with microinfarcts had higher brain atrophy rates independent of Alzheimer disease, and the atrophy localized to cerebral watershed zones—an important consideration when using volumetric MRI as an outcome measure in clinical trials.

See p. 1951

Anti-agrin autoantibodies in myasthenia gravis

The authors determined the presence of anti-agrin antibodies in 54 sera from patients with generalized myasthenia gravis using a solid-phase ELISA with purified mini-agrin protein. Cases of myasthenia gravis might contain autoantibodies against several proteins at a much higher frequency than previously anticipated.

See p. 1976

From editorialists Drachman & Kaminski: "Now it will be important to determine whether anti-agrin antibodies can affect the Achilles' heel at the NMJ [neuromuscular junction] and cause yet another myasthenic syndrome."

See p. 1942

Lower motor neuron disease with respiratory failure caused by a novel MAPT mutation

Genome-wide linkage analysis and exome sequencing were used to identify a novel D348G MAPT mutation in a family with autosomal dominant lower motor neuron disease. This discovery broadens the spectrum of phenotypes associated with MAPT mutations and offers new possible diagnostic and therapeutic approaches for a category of presently incurable diseases.

See p. 1990

Congenital mirror movements: Mutational analysis of RAD51 and DCC in 26 cases

This article sheds light on a little-known neurogenetic disorder, congenital mirror movements (CMM). Genetic analyses showed that 12 out of 26 probands had a variant in one of the 2 identified culprit genes. Variants in DCC and RAD51 are strongly associated with CMM, but other genes likely remain to be discovered.

See p. 1999

Initial cognitive decline is associated with cortical thinning in early Parkinson disease

Early mild cognitive impairment (MCI) is associated with an increased risk of developing dementia in Parkinson disease (PD). The authors found that newly diagnosed, drug-naïve PD patients with MCI had cortical thinning in temporal, parietal, and frontal regions, which could serve as a marker of initial cognitive decline in early PD.

See p. 2017

Multimorbidity and the risk of restless legs syndrome in 2 prospective cohort studies

The number of comorbid conditions was an independent risk factor for incident restless legs syndrome based on 2 studies. Multimorbidity, regardless of the specific chronic diseases, was a strong risk factor for restless legs syndrome in the general population.

See p. 2026

NB: "The quest to prevent stroke in atrial fibrillation: Fighting the fluttering heart in Singapore," see p. 2034. To check out other Global Perspectives, point your browser to Neurology.org.

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