In Focus

Spotlight on the July 23 Issue

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Life-span cognitive activity, neuropathologic burden, and cognitive aging

Older persons rated late-life and early-life participation in cognitively stimulating activities. After a mean of 5.8 years of annual cognitive function testing, 294 individuals had died and underwent neuropathologic examination. Frequent cognitive activity accounted for an additional 14% of the variability in rates of cognitive decline, consistent with the cognitive reserve hypothesis.

See p. 314; Editorial, p. 308

Inverse occurrence of cancer and Alzheimer disease: A population-based incidence study

Cancer risk was reduced by about 50% in patients with Alzheimer disease (AD), and the risk of AD was reduced by about 35% in persons with cancer. This observation suggests partially alternative modalities of human senescence.

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From editorialists Roe & Behrens: "…regardless of the particular mechanism underlying the relationship, if future research confirms that the development of cancer and AD are inversely associated, this knowledge may help in gaining a better understanding of and developing new treatments for both diseases."

See p. 310

Differentiating primary progressive aphasias in a brief sample of connected speech

A brief sample of connected speech was elicited from 62 persons drawn from 3 subgroups of patients with primary progressive aphasia (PPA): nonfluent/agrammatic, logopenic, and semantic. The subgroups were distinguished by easily quantifiable features of speech production. This simple protocol may aid in the differential diagnosis of PPA syndromes.

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Syndromes dominated by apraxia of speech show distinct characteristics from agrammatic PPA

This study underscores the importance of proper speech and language characterization in neurodegenerative syndromes. Syndromes dominated by progressive apraxia of speech have different motor speech and neuroimaging characteristics compared to syndromes dominated by agrammatic aphasia. Apraxia of speech should be absent, or at most minimal, to diagnose agrammatic PPA.

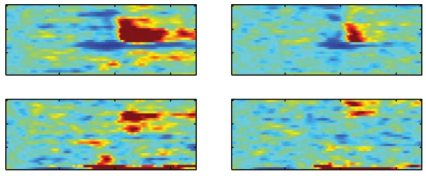
See p. 337

Evolution of mild cognitive impairment in Parkinson disease

Using new consensus criteria, the authors found that one-third of patients with Parkinson disease (PD) already had PD-mild cognitive impairment (MCI) at time of diagnosis, and after 5 years 50% developed PD-MCI. The new criteria are reliable for clinical practice and may identify patients who will eventually develop dementia.

See p. 346

Reduced postmovement cortical inhibition in patients with paroxysmal kinesigenic dyskinesia



Movement-related oscillation was recorded in 16 patients with paroxysmal kinesigenic dyskinesia (PKD) and 17 controls, with patients with PKD showing a decreased postmovement inhibition bilaterally. Movement-related electrophysiologic measures may be a marker of the clinical severity of PKD.

See p. 353

GFPT1-myasthenia: Clinical, structural, and electrophysiologic heterogeneity

Some recently emerging neurologic diseases of abnormal protein glycosylation cause congenital myasthenic syndromes. This paper reports on 11 patients with 12 novel mutations in glutamine-fructose-6-phosphate transaminase 1 (*GFPT1*) harboring hypoplastic endplates and varied defects of neuromuscular transmission. One patient had loss of the muscle-specific *GFPT1* exon and autophagic myopathy.

See p. 370

Electrographic seizures in pediatric ICU patients: Cohort study of risk factors and mortality

In 550 children in pediatric ICUs, EEG monitoring identified electrographic seizures in 30%. Electrographic status epilepticus occurred in 38% and was associated with greater odds of in-hospital death after multivariable analysis. Further study is needed to determine whether seizure identification and management could serve as a neuroprotective strategy.

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