In Focus

Spotlight on the August 31 Issue

Robert A. Gross, MD, PhD, FAAN

Editor-in-Chief, *Neurology*®

Insulin resistance is associated with the pathology of Alzheimer disease: The Hisayama Study

This study reports diabetes-related factors in specimens from a series of 135 autopsies (74 men and 61 women) performed between 1998 and 2003. The results indicate that hyperinsulinemia and hyperglycemia caused by insulin resistance promotes β -amyloid plaque formation in combination with the effects of APOE ϵ 4.

See p. 764

From editorialist Jose Luchsinger: "The main advantage of the study by Matsuzaki et al. over other studies is the direct measurement of insulin and insulin resistance, in addition to the measures of glycemia, more than a decade before persons died."

See p. 758

Secular changes in cognitive predictors of dementia and mortality in 70-year-olds

Two representative cohorts of 70-year-olds who were initially free of dementia were examined for the outcome of dementia and death. Memory problems appeared to be the only persistent sign that heralds dementia across generations, which may have implications in planning and carrying for elderly baby-boomers.

See p. 779; see also p. 786

Change in risk of Alzheimer disease over time

This population-based study evaluated 1,695 subjects for incident AD over 11 years. There appeared to be no significant change in age-specific risk; however, the number of people with Alzheimer disease will greatly increase in the future because of the aging population.

See p. 786; see also p. 779

Nonconvulsive seizures after traumatic brain injury are associated with hippocampal atrophy

Prospective continuous EEG monitoring was done in 140 patients with moderate-severe traumatic brain injury (TBI); in addition, 16 selected patients had serial volumetric MRI acutely and at 6 months after TBI. These data suggest anatomic damage was possibly elicited by nonconvulsive seizures in the acute postinjury setting.

See p. 792; Editorial, p. 760

Seasonal prevalence of MS disease activity

Frequent MRIs in 44 untreated patients with MS revealed a more than 2-fold increase in lesion activity during the spring and summer months. Results showed the dynamic nature of MS at a timescale much

shorter than usual, further validating MRI as the critical tool in capturing true morphologic change.

See p. 799; Editorial, p. 762

Novel missense and truncating mutations in *FUS*/*TLS* in familial amyotrophic lateral sclerosis (FALS) and ALS/dementia

Yan and colleagues screened a large FALS cohort showing that *FUS* mutation was more prevalent than TDP-43 in FALS. Waibel et al. identified 2 novel heterozygous *FUS*/*TLS* mutations in 4 German ALS families including the novel missense mutation K510R and the truncating mutation R495X. Both papers showed that *FUS* gene mutations were not an uncommon cause of FALS in patients from diverse backgrounds.

See p. 807 and p. 815

Docosahexaenoic acid therapy in peroxisomal diseases: Results of a double-blind, randomized trial

This trial treated 50 individuals with supplements of DHA (100 mg/kg per day). Primary outcome measures were the change from baseline in the visual function and physical growth during 1 year follow-up. DHA supplementation did not improve the visual function or growth of treated individuals with peroxisome assembly disorders.

See p. 826

NB: "Teaching Video Neurolmages: Involuntary muscle contractions in Hoffman syndrome" in print but point your browser to www.neurology.org/misc/Residents_and_Fellows.dtl to see additional contributions online.

See p. 836

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