Research

Vitamin D Status During Pregnancy and Multiple Sclerosis Risk
Munger et al examine whether serum 25-hydroxyvitamin D (25(OH)D) levels in early pregnancy are associated with risk of multiple sclerosis (MS) in offspring. Maternal serum 25(OH)D levels were measured using a chemiluminescence assay. The risk of MS among offspring and association with maternal 25(OH)D levels were the main outcomes. They find that insufficient maternal 25(OH)D during pregnancy may increase the risk of MS in offspring. Editorial perspective is provided by Benjamin M. Greenberg, MD, MHS.

Antipsychotic Use and Mortality Risk in Parkinson Disease
Weintraub and coauthors determine whether antipsychotic (AP) use in patients with Parkinson disease (PD) is associated with increased mortality. The rates of 180-day mortality were compared in 7877 patients initiating AP therapy and 7877 patients who did not initiate AP therapy (matched for age ±2.5 years, sex, race, index year, presence and duration of dementia, PD duration, delirium, hospitalization, Charlson Comorbidity Index, and new nonpsychiatric medications). They show that use of APs is associated with a significantly increased mortality risk in patients with PD, after adjusting for measurable confounders. Editorial perspective is provided by Mark S. Baron, MD.

Cerebral Ischemia and Diffusion Hypoxia in Traumatic Brain Injury
Veenith and colleagues combine fluorine 18–labeled fluoromisonidazole and oxygen 15–labeled positron emission tomography to demonstrate the relative burden, distribution, and physiologic signatures of conventional macrovascular and microvascular ischemia in early traumatic brain injury (TBI). They estimated ischemic brain volume and hypoxic brain volume and compared their spatial distribution and physiologic signatures. They report that tissue hypoxia after TBI is not confined to regions with structural abnormality and can occur in the absence of conventional macrovascular ischemia. This physiologic signature is consistent with microvascular ischemia and is a target for novel neuroprotective strategies. Editorial perspective is provided by Paul M. Vespa, MD.

Diagnostic Utility of Neurogranin in Alzheimer Disease
Tarawneh and colleagues investigate the diagnostic and prognostic utility of cerebrospinal fluid (CSF) neurogranin levels in a large, well-characterized cohort of individuals with symptomatic Alzheimer disease (AD) and cognitively normal controls. They provide correlations between baseline CSF biomarker levels and future cognitive decline in patients with symptomatic AD and cognitively normal controls over time. They report that CSF neurogranin complements the collective ability of these markers to predict future cognitive decline in cognitively normal individuals and, therefore, will be a useful addition to the current panel of AD biomarkers. Editorial perspective is provided by Steven T. DeKosky, MD, and Todd Golde, MD, PhD.

Clinical Review & Education

Recommendations for the Management of Strokelike Episodes in Patients With Mitochondrial Encephalomyopathy, Lactic Acidosis, and Strokelike Episodes
MK Koenig and Coauthors

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