Past adult lead exposure is linked to neurodegeneration

Stewart et al. studied former organolead workers and evaluated them an average of 18 years after their last lead exposure. They found white matter lesions and smaller, structure-specific (e.g., cingulate, insula) brain volumes that were related to cumulative lead dose as measured by tibia lead.

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The editorial by Rowland and McKinstry notes that it has become possible to measure the cumulative amount of lead stored in bone through noninvasive x-ray fluorescence (XRF). Before XRF, lead levels in urine or blood were used to estimate exposure but were only useful as measures of recent exposure. The significant dose-response pattern with cumulative lead exposure in this study is consistent with a causative effect. The finding that blood pressure correlated with number of white matter lesions and total brain volume complicates matters because lead also increases blood pressure and is therefore an intermediate variable on the hypothesized causal path between lead exposure and white matter lesions or reduced brain volume. The editorialists believe that the authors were prudent in controlling for blood pressure. Their report suggests strongly that organic lead exposure is associated with white matter lesions, brain atrophy, and progressive cognitive decline.

see page 1464

Neuralgic amyotrophy presenting with phrenic neuropathy

Tsao et al. report the clinical characteristics of 17 patients with neuralgic amyotrophy who presented with apparently isolated phrenic neuropathy.

see page 1582

Essential tremor and dementia

Benito-León et al. identified all persons with essential tremor and prevalent dementia in a population-based study in central Spain. Essential tremor cases with tremor onset after age 65 years were 70% more likely to be demented than were controls.

see page 1500

Revised diagnostic criteria for neuromyelitis optica

Wingerchuk et al. studied 129 patients with optic neuritis and myelitis. The presence of at least two of the following three criteria—spinal cord lesion extending over ≥ 3 vertical segments, normal brain MRI at onset, NMO-IgG seropositivity—was 99% sensitive and 90% specific for neuromyelitis optica. The authors propose updated diagnostic criteria to reflect these observations.

see page 1485

Neuromyelitis optica diagnosis in clinically isolated syndromes

Rubiera et al. applied diagnostic criteria for neuromyelitis optica to a large cohort of clinically isolated syndromes patients and found that current criteria rarely suggest neuromyelitis optica frequency in patients presenting with clinically isolated syndromes.

see page 1568

The editorial by Douglas A. Kerr about these two articles emphasizes the need to use a combination of clinical findings, serologic markers, and imaging characteristics to help differentiate the many forms of CNS inflammatory disorders, allowing us to more accurately determine their natural histories and optimal treatment.

see page 1466

Chronic hyperCKemia: Yield of muscle biopsy

Fernandez et al. report 104 clinically normal subjects with chronic hyperCKemia. Muscle biopsy led to a diagnosis in 57 patients, most frequently glycogenoses and muscular dystrophies.

see page 1585

Lamotrigine and cognition in children with epilepsy

In a double-blind, placebo-controlled, crossover study, Pressler et al. examined the effect of lamotrigine on cognition in children. Using a comprehensive cognitive test battery, no significant effect was found in 61 patients with mild or well-controlled epilepsy.

see page 1495

Hippocampal stimulation in temporal lobe epilepsy

Hippocampal electrode implantation.

In blinded, multiple, crossover, randomized trials, Tellez-Zenteno et al. found that hippocampal stimulation was safe and associated with improvement in seizures in four patients with temporal lobe epilepsy. However, the study raises questions about the adequacy of crossover trials for this intervention, and about possible beneficial effects of the electrode implantation itself.

see page 1490

Thalamic deep brain stimulation for epilepsy

Andrade et al. present long-term follow-up on eight patients with intractable epilepsy treated with thalamic deep brain stimulation. Those with anterior stimulation showed $\geq 50\%$ seizure reduction, while those with centromedian stimulation did not. Benefit was not linked to specific stimulation parameters, raising the question of benefit secondary to microthalamotomy.

see page 1571

The editorial by Lesser and Theodore about these two articles compares medicinal and surgical approaches to epilepsy treatment. Although deep brain stimulation may be helpful, they sound a cautionary note: the treatment effects in the present studies were modest. Moreover, confounds in these studies—including reductions in seizures without active stimulation and alterations in medications during the treatment period—preclude a definitive endorsement; additional trials are necessary.

see page 1468

Effect of multidisciplinary stroke services on mortality

Birbeck et al. analyzed the associations of having a multidisciplinary stroke service on mortality among over 56,000 patients with stroke at 257 California hospitals. Patients admitted to hospitals having a stroke service had better survival, but such multidisciplinary teams were available at only 8% of hospitals.

There is a Patient Page on this topic: www.neurology.org.

see page 1527

Declining incidence of lacunar infarction in Japan

Kubo et al. examined secular trends in the incidence of ischemic stroke subtypes among three Hisayama cohorts and found that the incidence of lacunar infarction steadily declined for the past 40 years, possibly related to the improved control of hypertension and cessation of smoking.

see page 1539

Late in-stent thrombosis following carotid angioplasty and stenting

The importance of antiplatelet therapy following carotid stenting is demonstrated by Buhk et al. A delayed in-stent thrombosis occurred in three patients after antiplatelet therapy was prematurely discontinued.

see page 1594

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