Neurologic services in Africa

Bower and Guta surveyed representatives from every African nation to determine the current state of neurologic services available. Although there was a wide variation among the countries, neurologic services in Africa are far below those in the United States and other developed countries. The highest ratio of neurologist/population included 10 countries with 1 per 700,000. Thirty-five countries have either no neurologists or a maximum of 1 per 5 million people—one of the major contributors to the lack of treatment for most neurologic diseases.

see page 412

Neurochemical markers of childhood adrenoleukodystrophy

The benefit of hematopoietic cell transplantation for childhood-onset adrenoleukodystrophy (ALD) depends on early detection of cerebral disease. Using high field magnetic resonance spectroscopy (MRS), Öz et al. identified seven biochemical markers of white matter lesion development. Neurochemical alterations preceded structural changes, and some MRS abnormalities were reversed by treatment.

see page 434

The accompanying editorial by Moser and Barker discusses the inability to predict whether a young asymptomatic boy with ALD is at risk for adrenomyeloneuropathy (AMN) or for CERALD, the rapidly progressive inflammatory cerebral phenotype, which is a serious gap in knowledge about ALD. Hematopoietic stem cell transplantation (HSCT) can benefit patients with CERALD. Hematopoietic stem cell transplantation has a narrow window of opportunity in CERALD. The broader spectrum of 12 metabolites in the Öz et al. study may make it possible to assess more accurately the relative contributions of disease processes such as demyelination, inflammatory cell infiltration, gliosis, and axonal damage. If MRS can be shown to detect CERALD at its inception and before abnormalities are demonstrable by conventional MRI, it may provide the opportunity to test relatively rapidly the effects of new anti-inflammatory or immunosuppressive therapies at the inception of the disease process, while indications for transplantation are being assessed.

see page 406

Smoking and PD in siblings

Scott et al. evaluated the association of smoking with Parkinson disease (PD) in a family-based case-control study of 140 sibships. Even in siblings that are overmatched on many exposures, having ever smoked, and increasing duration, dose, and intensity of smoking lowered the risk of PD.

see page 442

The accompanying editorial by Demetrius M. Maraganore notes that while family-based association studies are usually used for study of genetic factors, the same design can be used for study of environmental factors. This study confirmed that smoking lowered the risk of PD using a different, family-based design of environmental (rather than genetic) factors. Discordant sibling analyses are more likely to detect differences between affected and unaffected siblings in view of their common background. Maraganore also reviews the weaknesses of family-based association studies.

see page 408

Retroviral involvement in ALS

Steele et al. obtained evidence of retroviral involvement in sporadic ALS by detecting reverse transcriptase (RT) activity in 47% of patient sera. The finding of a similarly increased RT prevalence in relatives suggests that the observed activity might be due to an inherited endogenous retrovirus.

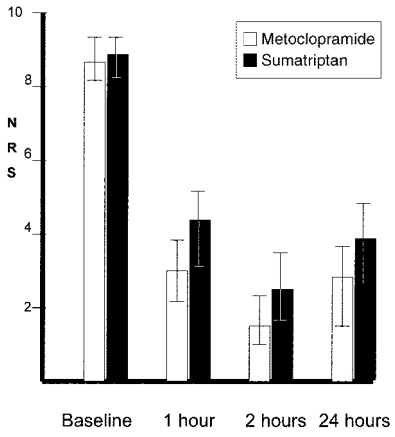
see page 454

The accompanying editorial by Robberecht and Jubelt notes that an ALS-like motor neuron disorder, potentially reversible, occurs in HIV-infected patients and HTLV-1 causes an upper motor neuron disease: tropical spastic paraparesis. Thus, retroviruses certainly deserve attention as a possible cause of motor neuron disease. In this study serum RT activity was found not only in ALS patients, but also in some controls, and, more importantly, it was also present with a frequency similar to that of ALS patients in the serum of the patients' relatives who had no evidence of ALS. The RT activity may be coming from an inherited endogenous retrovirus, and another factor must be needed to cause disease. Alternatively, the presence of RT activity may be an epiphenomenon, linked to another, yet unknown, but pathogenically important factor.

see page 410

continued on page 405

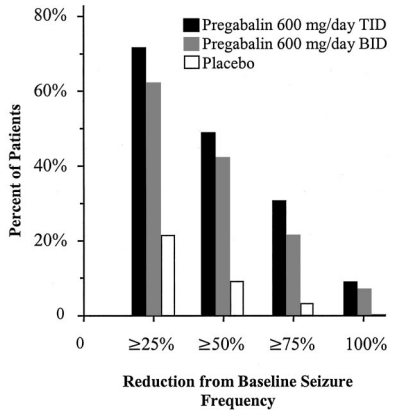
Metoclopramide for migraine: Comparison with a triptan



In a double-blind randomized controlled trial conducted in two urban emergency departments by Friedman et al., aggressive IV dosing of metoclopramide relieved the pain of migraine headaches comparably to subcutaneous sumatriptan. Secondary outcomes suggested the superiority of metoclopramide.

see page 463

Adjunctive treatment with pregabalin in focal epilepsy



Beydoun et al. evaluated the efficacy of adjunctive therapy with pregabalin vs placebo in 313 patients with medically refractory focal epilepsy. Pregabalin at 600 mg/day on a BID or TID schedule resulted in a significant reduction in seizure frequency and was generally well tolerated.

see page 475

Cerebrovascular deficits in marijuana users

Cerebral blood flow velocity was recorded by Herning et al. in a study of marijuana users. Marijuana users had increased cerebrovascular resistance compared to control subjects. This increase persisted after a month of abstinence.

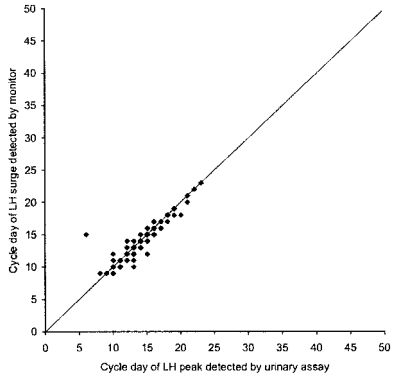
see page 488

Volumetric MRI measurement is confounded by dehydration

Duning et al. studied the effect of thirsting and fluid intake on MRI-based brain volume measurement. The detected effects were of the same order of magnitude as reported in many studies on neurodegeneration.

see page 548

Predicting menstrual migraine



Monitor performance: luteinizing hormone (LH) surge cycle day (monitor) vs LH peak cycle day (urine analysis).

In a study of 27 women with menstrual or menstrually related migraine by MacGregor et al., a home-use fertility monitor enabled accurate prediction of menstruation and precise timing of perimenstrual migraine prophylaxis.

see page 561

February 8 Highlights

Neurology 2005;64;404-405
DOI 10.1212/WNL.64.3.404