November 28 Highlights

Vagus nerve stimulation (VNS): Effect on breathing during sleep

The expedited publication by Malow et al. (p. 1450) reports sleep evaluations in four epilepsy patients with implanted VNS before and 3 months after VNS implantation. Patients were studied both during and following VNS activation. VNS caused a sleep-related decrease in airflow; however, only in the one patient with obstructive sleep apnea did this seem to be of clinical importance.

Childhood mental ability and dementia

Whalley et al. (p. 1455) correlated tests of mental ability (performed in 1932) of Aberdeen residents born in 1921 with subsequent development of early- and late-onset dementia. Lower 1932 test scores were associated with late-onset but not early-onset dementia.

♦ The accompanying editorial by Mayeux (p. 1428) notes that the accumulating evidence for early-life abnormalities in patients who eventually develop AD has important implications for pathogenesis and for efforts at developing treatments.

Cholinergic neurotransmitter system and behavioral changes in AD

Minger et al. (p. 1460) compared brain neurotransmitters in a large population of AD patients versus controls. Subjects had longitudinal clinical characterization before death. Choline acetyltransferase activity was selectively reduced, and the localized extent of reduction correlated with hyperactive behaviors and with cognitive deficits. The data provide rationale for treatments modulating the cholinergic system.

Autosomal dominant nocturnal frontal lobe epilepsy (ADNFLE) gene locus

Gambardella et al. (p. 1467) add to the increasing number of epilepsies likely to be caused by channelopathies. They studied a large kindred with a distinctive syndrome of nocturnal motor seizures originating in the frontal lobe. After excluding the locus for the $\alpha 4$ subunit of the neuronal Ach receptor and a chromosome 20g locus, both of which cause ADNFLE, they localized the gene to chromosome 15q24—a region which includes the β2 subunit of the Ach receptor. • The accompanying editorial by Ptáček (p. 1429) notes that although ADNFLE appears as a single clinical entity, it can be caused by mutations of at least two different genes that result in dysfunction of subunits of the nicotinic Ach receptor. As a prototype of ligandgated channelopathies, discoveries in ADNFLE may pave the way to understanding other epilepsies and to designing new treatments.

Rationing health care: How do neurologists prioritize?

Holloway et al. (p. 1492) used standard clinical scenarios to survey US neurologists concerning their allocation of limited resources for expensive drugs, and to assess US neurologists' use of cost-effectiveness data. The majority of neurologists now made decisions to ration health care resources, whereas in 1995, only a quarter agreed to rationing. Although neurologists clearly use cost-effectiveness data, many place considerable weight on equity—helping a larger number of patients by restricting the use of expensive drugs.

Migraine and the menstrual cycle

Stewart et al. (p. 1517) obtained prospective data in 81 menstruating women with migraine with daily headache

diaries. Migraine headache risk was highest at the onset of menses and lowest at the time of ovulation. Headaches had greater pain intensity at the onset of menses.

Anti-glutamic acid decarboxylase antibodypositive stiff-person syndrome (SPS)

Dalakas et al. (p. 1531) studied 20 antibody-positive patients with SPS (6 men, 14 women). Average age at onset was 41 years, and diagnosis was delayed by an average of 6 years from symptom onset (range, 1 to 18 years). All but one patient had truncal stiffness and falls that necessitated a cane or walker to ambulate. Asymmetric involvement of one leg was frequent (15/20) as was facial stiffness (13/20).

APOE €4 and rehabilitation outcome of traumatic brain injury (TBI)

Lichtman et al. (p. 1536) correlated functional independence with APOE $\epsilon 4$ allele in 31 patients with TBI (controlling for severity of head injury by using number of days in coma). Functional independence in terms of motor scores (but not for cognitive scores) were lower in those with APOE $\epsilon 4$ alleles.

Spirtuality and religiousness and outcome in ALS

Murphy et al. (p. 1581) assessed 46 ALS patients as to the effect of spirituality and religiousness on patient attitudes toward technology and survival, and on coping strategies. They noted that usual quality of life measures do not assess spirituality and religiousness. Spirituality and religiousness influenced choices of feeding and ventilation procedures, which may reflect greater comfort in the dying process.



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