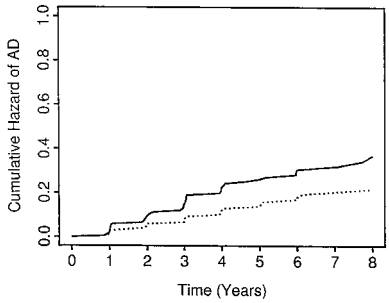
Emotional vulnerability predicts dementia in those with AD lesions



Adjusted cumulative hazard of developing AD in quintiles with the least (dotted line) and most (solid line) distress proneness

Wilson et al. found that a tendency to experience psychological distress (neuroticism) was associated with AD dementia and episodic memory decline, but not with postmortem measures of cortical plaques and tangles. Distress proneness thus appears to influence dementia risk independently of traditional measures of AD pathology.

see page 1479

In an accompanying editorial, Breitner and Costa discuss the concept of neuroticism as an abiding personality characteristic, its relation to depressive symptoms and to cognitive dysfunction, and the potential implications and methodologic pitfalls of these results.

see page 1468

MS and depression in the general population

Patten et al. studied the association between MS and major depression in a population-based random sample (n = 115,071). The prevalence of major depression was higher in people with MS than in the general population, and also exceeded that of subjects reporting other medical conditions.

see page 1524

Getting lost: Cascaded deficits in aging and AD

Monacelli et al. studied route navigation in both patients with Alzheimer's disease and older adults. They found that a tendency to become lost is most strongly predicted by failure on a test of route learning that requires subjects to recall the visuospatial configurations at turning points and to place them in a mental map of the route.

see page 1491

Withered cortex and wasted drawings: The right inferotemporal cortex in AD

Early AD is associated with variable degrees of visuospatial impairment. Boxer et al., using voxel-based morphometric analysis of structural MRI scans, found that the ability to copy a complex two-dimensional figure was directly correlated with right inferior temporal gyrus atrophy.

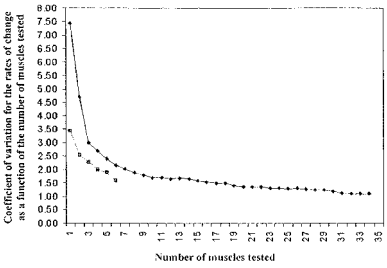
see page 1485

The accompanying editorial by Stephen E. Nadeau notes that Monacelli et al. have both elucidated the complex cognitive processes underlying route navigation and introduced a novel and potentially very effective technique for early clinical detection of AD: the utilization of tests probing multiple cognitive domains in which the deficits are effectively additive or multiplicative. Boxer et al. used a study of patients with AD to localize an important cognitive function that has defied attempts at localization through studies of patients with stroke.

see page 1470

continued on page 1467

Strength testing in ALS trials



Manual muscle testing (diamonds) and maximal voluntary isometric contraction (squares)

Sorenson et al. compared maximal isometric contraction (MVIC) testing of muscle strength with manual muscle testing (MMT) in ALS. MMT was favored slightly because more muscles can be tested in each person. MMT is a good method for assessing strength in ALS clinical trials.

see page 1503

The accompanying editorial by Leigh and Mitsumoto summarizes the pros and cons of maximal voluntary isometric contraction (MVIC) and manual muscle testing (MMT) as measurements of muscle strength in ALS trials. Although MVIC can accurately measure muscle strength, it is less convenient and fewer muscle groups can be tested than with MMT. The latter can be used to assess many muscle groups and, providing the assessors are well trained, it has significant advantages over MVIC in large-scale, multicenter ALS trials.

see page 1472

The genes behind idiopathic generalized epilepsies

Winawer et al. report evidence for separate genetic effects on absence and myoclonic seizures. Their results suggest that genetic studies of idiopathic generalized epilepsies should subgroup patients by seizure type rather than (or in addition to) syndrome.

see page 1576

Exacerbations and residual deficits in MS

Lublin et al. report that there is measurable residual deficit from exacerbations in a significant percentage of MS patients, confirming and quantifying the presence of step-wise worsening. These results support the role of exacerbations in long-term disability in MS and provide a rationale for treatment that reduces the frequency of exacerbations.

see page 1528

A haplotype influences onset age for Parkinson disease

In a sample of 527 patients with familial Parkinson's disease, Karamohamed et al. examined polymorphisms associated with onset age at the PARK3 locus on chromosome 2p13. The combination of three alleles (A-T-G) was associated with younger onset, suggesting that the nearby sepiapterin reductase gene may influence PD.

see page 1557

Hyperhomocysteinemia as a risk factor for silent brain infarction

Kim et al. report that hyperhomocysteinemia is an independent risk factor for silent brain infarction, and the high-level group has 4.8 times greater risk than the low-level. They also found an inverse relationship between homocysteine and folate levels in patients with MTHFR 677TT genotype.

see page 1595

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