

Prognosis of migraine headaches in adolescents

Monastero et al. followed 55 adolescents with migraine headaches, drawn from a population-based study, over a 10-year period. They found that migraine headaches in adolescents had a favorable long-term prognosis. Patients with a family history of migraine had a poorer prognosis, especially in those with migraine without aura.

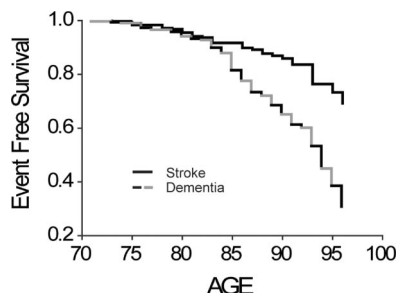
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Vascular risk and progression of AD

Regan et al. followed 224 people with AD over an 18-month period. They found that cerebrovascular events but not vascular risk factors, as measured both clinically and biochemically, were related to deterioration rate in terms of cognition, functioning, and neuropsychiatric symptoms.

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Clinical stroke and dementia risk



Gamaldo et al. assessed the risk of dementia following stroke in a prospective cohort. Almost all subjects who became demented after a stroke had cognitive impairment preceding the stroke. Subjects who were cognitively normal before the stroke did not have an increased risk of subsequent dementia.

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

The editorial by Charles S. DeCarli notes that the Regan et al. study shows that incident stroke occurred in approximately 3% of the subjects over 18 months and was the only risk factor significantly associated with increased rate of cognitive impairment. This supports the possibility that vascular risk factors may have only a small impact on cognition as compared to the AD process. There is considerable support for this hypothesis. Previous reports indicated that the greatest effect of CVD on risk for dementia occurs when AD pathology is mild. Cerebrovascular risk factors, therefore, may have the greatest influence on the trajectory of brain imaging thereby acting to increase the susceptibility to late life cognitive impairments.

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Fruit or vegetable consumption and the risk of cognitive decline

Morris et al. examined the relation of fruit and vegetable consumption to cognitive decline in a community of over 3,000 older persons. Baseline high consumption of vegetables but not fruits was associated with reduced global cognitive decline during up to 6 years of observation.

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Projected costs of stroke in the United States

Brown et al. estimated costs of ischemic stroke in the United States in the next half century to exceed \$2 trillion. African Americans and Hispanics are projected to have enormous and increasing stroke-related costs, with higher per capita costs than non-Hispanic whites.

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The editorial by Ovbiagele and Levine notes that this study may actually underestimate future stroke costs. Asian patients with stroke and those younger than 45 years were not considered in this study and first-ever strokes and recurrent strokes were assumed to incur the same direct costs, even though clinical outcomes following recurrent strokes are generally worse than first-ever stroke.

No serious attempt at reducing the societal economic burden of stroke can be made without targeting groups that are at highest risk for stroke. Explaining the increased stroke incidence in minorities vs non-Hispanic whites through expanding research, addressing socioeconomic barriers to optimal health, and improving stroke awareness among minority groups and the medical care professionals who care for them could begin to reduce racial and ethnic disparities.

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Family history of stroke and stroke severity

The Meschia et al. five-center, prospective observational study of 505 cases with first-ever symptomatic stroke found that a sibling history of stroke doubled the likelihood of having more severe neurologic deficits as assessed by the NIH Stroke Scale.

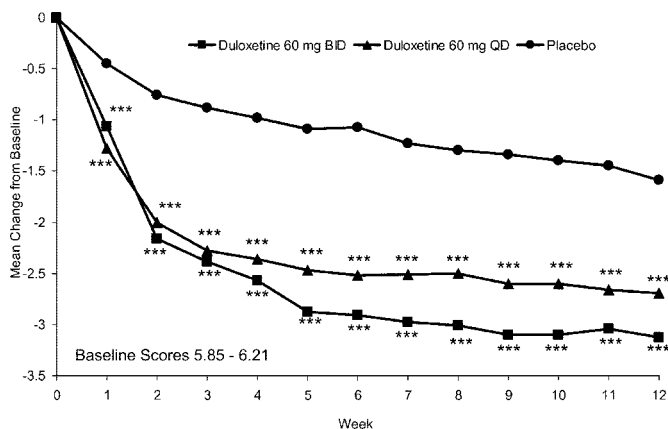
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Factors influencing ischemic stroke severity

Deplanque et al. determined initial and short-term severity in a cross-sectional study of 362 consecutive patients with acute supratentorial ischemic stroke. The authors found that prior leisure-time physical activity, TIA, and treatment with lipid-lowering drug were independently associated with a lower stroke severity.

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Duloxetine in diabetic peripheral neuropathic pain



Wernicke et al. assessed the efficacy and safety of duloxetine (n = 226) vs placebo (n = 108) in a 12-week study of patients with diabetic peripheral neuropathic pain. Duloxetine was found to be effective in reducing pain severity, had a rapid onset, and was safely administered.

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Occupation and cognition among elderly male twins

Potter et al. found that higher intellectual demands were associated with longitudinal cognitive improvement among elderly male twin pairs, whereas higher physical and visual attention demands were associated with decline. These effects were not significant among monozygotic twins, suggesting that occupational characteristics may be markers for underlying genetic influences.

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Allogeneic stem cell transplantation for MNGIE

Hirano et al. performed allogeneic stem cell transplantations (alloSCT) in two MNGIE patients to restore thymidine phosphorylase. In the first, transplantation failed, but in the second, alloSCT corrected biochemical abnormalities.

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Prospects for treatment of MNGIE

Lara et al. achieved transient reduction of nucleoside overload in two MNGIE patients through infusion of platelets, supporting the notion that permanent restoration of circulating thymidine phosphorylase may be therapeutic.

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The editorial by Chinnery and Vissing about these two articles notes that mitochondrial neurogastrointestinal encephalomyopathy (MNGIE) is an autosomal recessive disease due to loss-of-function mutations in the nuclear gene coding for the cytosolic enzyme thymidine phosphorylase (TP, also called endothelial cell growth factor 1, ECGF1). MNGIE presents in late childhood with ptosis, progressive external ophthalmoplegia, gastrointestinal dysmotility, leukoencephalopathy, and peripheral neuropathy. Patients with MNGIE acquire characteristic secondary abnormalities of mtDNA thought to be a direct toxic effect of high nucleoside levels compromising mtDNA replication and repair, affecting both quality (point mutations and deletions) and quantity (depletion) of the mitochondrial genome. Lara et al. do not suggest that repeated platelet infusions could be a long-term treatment for MNGIE, because the reduction of dThd and dUrd was modest and transfused platelets only have a short lifespan. Whether this has an effect on the clinical phenotype also remains to be seen. Hirano et al. lowered nucleosides levels with alloSCT. The transplants partially restored TP activity in the recipients, and lowered plasma dThd and dUrd levels. The clinical effect of the treatment, however, is unknown, and the treatment has serious risks.

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October 24 Highlights

Neurology 2006;67;1324-1325

DOI 10.1212/01.wnl.0000244282.50149.4d

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