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IN BRIEF

STROKE

Stroke in young adults associated with long-term cognitive decline

Studies on long-term cognitive outcomes after stroke in young adults have been lacking. Now, a prospective study spanning 30 years and involving 267 patients who had an ischaemic stroke before the age of 50 years has revealed long-term decline in multiple cognitive domains—particularly processing speed, working memory, and attention—in up to 50% of patients. Such deficits could have consequences for quality of life, warranting further investigation to improve patient care.

Original article Schaapsmeeders, P. *et al.* Long-term cognitive impairment after first-ever ischemic stroke in young adults. *Stroke* doi:10.1161/STROKEAHA.111.000792

ALZHEIMER DISEASE

Skin cancer—protective effect against Alzheimer disease?

Risk of Alzheimer disease (AD) is slightly reduced in patients with nonmelanoma skin cancer (NMSC), according to a recent population-based longitudinal study. 1,102 community-dwelling adults aged over 70 years were assessed annually as part of the Einstein Aging Study in New York City, USA. Relative to those without NMSC, the hazard ratio for risk of AD was 0.21 in patients with NMSC ($P=0.031$). The neuroprotective effect of NMSC seems to be specific to classic AD, as risk of all-cause dementia or vascular AD did not differ according to NMSC status.

Original article White, R. S. *et al.* Nonmelanoma skin cancer is associated with reduced Alzheimer disease risk. *Neurology* doi:10.1212/WNL.0b013e3182941990

EPILEPSY

Transplantation of interneuron progenitors shows promise in mouse model of epilepsy

Impaired γ -aminobutyric acid (GABA) signalling is known to have a role in epilepsy, highlighting this process as a potential therapeutic target. Hunt *et al.* grafted GABAergic progenitors into the hippocampus of epileptic adult mice. The cells migrated throughout the hippocampal subfield and differentiated into functional inhibitory interneurons. Moreover, cell transplantation reduced seizure frequency by 92% and restored behavioural deficits in domains such as spatial learning.

Original article Hunt, R. F. *et al.* GABA progenitors grafted into the adult epileptic brain control seizures and abnormal behavior. *Nat. Neurosci.* doi:10.1038/nn.3392

WHITE MATTER DISEASE

CSF1R mutations in inherited leukodystrophies

Leukodystrophies are a group of hereditary neurological disorders involving CNS white matter deterioration and presenting with various clinical symptoms, ranging from seizures to muscle weakness and behavioural problems. Guerreiro *et al.* performed whole-exome and Sanger sequencing in 114 patients with leukodystrophy, including members of three extended families with a history of the disease. They identified 12 individuals with mutations in the gene *CSF1R*, suggesting screening for *CSF1R* mutations could be useful for diagnosis of this broad-spectrum disease.

Original article Guerreiro, R. *et al.* Genetic analysis of inherited leukodystrophies: genotype–phenotype correlations in the *CSF1R* gene. *JAMA Neurol.* doi:10.1001/jamaneurol.2013.698