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IN BRIEF

PARKINSON DISEASE

Dopamine transporter imaging in PD prognostication

Dopamine transporter (DAT) imaging has been used for diagnosis of Parkinson disease (PD), but a recent study has found that this approach could also be useful to determine PD prognosis. During a 5.5-year follow-up of 491 patients with PD who had dopamine deficiency, Ravina *et al.* found that lower baseline levels of striatal DAT, as observed on DAT imaging, were associated with increased risk of motor, cognitive and behavioural decline. Change from baseline DAT levels over 22 months was also associated with long-term PD-related outcomes.

Original article Ravina, B. *et al.* Dopamine transporter imaging is associated with long-term outcomes in Parkinson's disease. *Mov. Disord.* 27, 1392–1397 (2012)

PERIPHERAL NEUROPATHIES

Axonal neuropathy with neuromyotonia linked to loss-of-function mutations in *HINT1*

In a recent study of 33 families with the inherited disorder axonal neuropathy with neuromyotonia, researchers identified eight loss-of-function mutations in the *HINT1* gene, which encodes histidine triad nucleotide-binding protein 1. Functional analysis revealed that HINT1 protein is crucial for PNS physiology, but how loss-of-function mutations in the gene cause axonal neuropathy with neuromyotonia is unclear. HINT1-related neuropathies may represent a new entity among the myotonic syndromes.

Original article Zimon, M. *et al.* Loss-of-function mutations in *HINT1* cause axonal neuropathy with neuromyotonia. *Nat. Genet.* 44, 1080–1083 (2012)

MOTOR NEURON DISEASE

ALS risk associated with exposure to reproductive hormones

A population-based study in the Netherlands has found that longer exposure to female reproductive hormones is associated with a reduced risk of amyotrophic lateral sclerosis (ALS). A questionnaire to determine reproductive time span and exposure to endogenous oestrogen was completed by 209 patients with ALS and 672 control individuals. An increased reproductive time span of 1 year decreased the risk of ALS with an odds ratio of 0.95. The results suggest a neuroprotective effect of female reproductive hormones.

Original article de Jong, S. *et al.* Endogenous female reproductive hormones and the risk of amyotrophic lateral sclerosis. *J. Neurol.* doi:10.1007/s00415-012-6665-5

ALZHEIMER DISEASE

Protective mitochondrial DNA haplotypes in late-onset AD

Late-onset Alzheimer disease (LOAD) can occur sporadically or be inherited, possibly via maternally derived mitochondrial DNA. In a large genomic study of mitochondrial DNA in 1,007 patients with LOAD, two mitochondrial haplotypes—H6A1A and H6A1B—were found to be associated with a reduced risk of LOAD. The mechanism underlying this protective effect is unknown, and further validation studies are warranted.

Original article Ridge, P. G. *et al.* Mitochondrial genomic analysis of late onset Alzheimer's disease reveals protective haplogroups H6A1A/H6A1B: the Cache County study on Memory in Aging. *PLoS ONE* doi:10.1371/journal.pone.0045134