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IN BRIEF

PARKINSON DISEASE

History of concussion associated with high risk of PD

A role for head injury in the aetiopathogenesis of Parkinson disease (PD) has previously been suggested. Results from a new meta-analysis provide support for this hypothesis, suggesting that a history of head trauma leading to concussion is associated with a higher risk of PD. The analysis was performed on data from 22 studies, and revealed a pooled odds ratio for the association of PD and head trauma of 1.57 (95% CI 1.35–1.83).

Original article Jafari, S. *et al.* Head injury and risk of Parkinson disease: a systematic review and meta-analysis. *Mov. Disord.* doi:10.1002/mds.25458

NEURODEGENERATIVE DISEASE

The influence of Apo-E on soluble amyloid- β metabolism—study suggests novel mechanism of action

The various isoforms of apolipoprotein E (Apo-E) are thought to differentially affect Alzheimer disease (AD) risk through their interactions with amyloid- β (A β) in brain fluids, thereby influencing levels of A β accumulation. In a new study, however, researchers have shown that Apo-E has limited interaction with A β in solution. Instead, the investigators propose that Apo-E isoforms regulate metabolism of soluble A β by astrocytes—thereby influencing the risk of AD—by competing for the same clearance pathway in these cells.

Original article Verghese, P. B. *et al.* ApoE influences amyloid- β (A β) clearance despite minimal apoE/A β association in physiological conditions. *Proc. Natl Acad. Sci. USA* 110, E1807–E1816 (2013)

MIGRAINE

Migraine phases linked to plasma levels of PACAP-38

A new study, published in *Cephalalgia*, has revealed that PACAP-38-like immunoreactivity (PACAP-38-LI) is linked to phases of migraine. PACAP-38 is involved in activation of cerebral blood vessels. Tuka *et al.* assessed PACAP-38-LI in plasma during both ictal and interictal phases in 87 patients with migraine. Compared with healthy controls, patients had significantly lower PACAP-38-LI in the interictal phase. Migraineurs had elevated levels of PACAP peptide during the ictal phase relative to the interictal phase. Furthermore, a negative correlation between levels of interictal PACAP-38-LI and disease duration was identified.

Original article Tuka, B. *et al.* Alterations in PACAP-38-like immunoreactivity in the plasma during ictal and interictal periods in migraine patients. *Cephalalgia* doi:10.1177/0333120413483931

MOVEMENT DISORDERS

Novel MRI measure for diagnosis of progressive supranuclear palsy

Diagnosis of progressive supranuclear palsy (PSP) using standard MRI-based measurements has proved difficult. Using MRI, Massey *et al.* found that patients with pathologically confirmed PSP had a reduced midbrain:pons volume ratio compared with individuals with either Parkinson disease or multiple system atrophy, or with healthy controls. They suggest the midbrain:pons volume ratio as a novel MRI measure that represents a sensitive tool for diagnosis of PSP.

Original article Massey, L. A. *et al.* The midbrain to pons ratio: a simple and specific MRI sign of progressive supranuclear palsy. *Neurology* doi:10.1212/WNL.0b013e318292a2d2