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IN BRIEF

MULTIPLE SCLEROSIS

Activation of cortical microglia linked to level of disability in patients with multiple sclerosis

A PET imaging study to detect microglial activation in patients with multiple sclerosis (MS) has found a direct correlation between cortical microglial activation and disease severity. Politis *et al.* compared binding of the PET ligand ^{14}C -PK11195 in patients with various forms of MS. Total cortical binding of the ligand was positively associated with level of disability, with the strongest correlation in those with secondary progressive MS. No relationship was found between ligand binding in white matter and disability status.

Original article Politis, M. *et al.* Increased PK11195 PET binding in the cortex of patients with MS correlates with disability. *Neurology* doi:10.1212/WNL.0b013e3182635645

PAIN

Changes in corticostriatal functional network predict transition from subacute back pain to chronic-pain status

In a longitudinal brain imaging study of 39 patients with subacute back pain, researchers have identified reduced grey matter density and enhanced corticostriatal functional connectivity as a predictor of pain persistence. In patients who transitioned to chronic pain, connections between the nucleus accumbens and medial prefrontal cortex were more numerous and of higher intensity than in those who did not. Assessment of these connections at baseline identified patients who would transition from subacute to chronic pain.

Original article Baliki, M. N. *et al.* Corticostriatal functional connectivity predicts transition to chronic back pain. *Nat. Neurosci.* doi:10.1038/nn.3153

MULTIPLE SCLEROSIS

Efficacy of fingolimod confirmed on all MRI end points

An investigation into MRI outcomes in the FTY720 Research Evaluating Effects of Daily Oral Therapy in Multiple Sclerosis (FREEDOMS) trial has shown the beneficial effects of fingolimod in reducing inflammatory activity and burden of disease. Patients who received either 0.50 mg or 1.25 mg of fingolimod for 2 years had fewer new or newly enlarged T2 lesions compared with those receiving placebo. Furthermore, the 0.5 mg group exhibited a significant reduction in brain volume loss compared with the placebo group.

Original article Radue, E.-W. *et al.* Impact of fingolimod therapy on magnetic resonance imaging outcomes in patients with multiple sclerosis. *Arch. Neurol.* doi:10.1001/archneurol.2012.1051

CEREBROVASCULAR DISEASE

Reducing haematoma growth after intracerebral haemorrhage—size doesn't matter

Haematoma growth within the first 24 h following intracerebral haemorrhage (ICH) is associated with poor outcome. Delcourt *et al.* measured haematoma growth over 24 h in 335 patients with ICH, and assessed the link between growth and outcome. As a 1 ml increase in haematoma volume caused a 5% increase in risk of death or dependency, treatments that achieve even a small reduction in haematoma expansion could be clinically beneficial.

Original article Delcourt, C. *et al.* Hematoma growth and outcomes in intracerebral hemorrhage. The INTERACT1 study. *Neurology* doi:10.1212/WNL.0b013e318260cbba