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IN BRIEF

WHITE MATTER DISEASE

'Bright spotty lesions'—a novel NMO-specific MRI feature?

Spinal MRI findings have been used to distinguish patients with neuromyelitis optica (NMO) from those with multiple sclerosis (MS), with longitudinally extensive transverse lesions being the classic hallmark of NMO. In a study 24 patients with NMO and 35 patients with MS, Yonezu *et al.* identified 'bright spotty lesions' (BSLs) on spinal MRI in 54% of NMO cases and only 3% of MS cases. The researchers propose BSLs as a novel spinal MRI feature that could be useful for differentiation of NMO from MS.

Original article Yonezu, T. *et al.* "Bright spotty lesions" on spinal magnetic resonance imaging differentiate neuromyelitis optica from multiple sclerosis. *Mult. Scler.* doi:10.1177/1352458513495581

NEURODEVELOPMENTAL DISORDERS

New brain imaging measure for early diagnosis of autism

Diagnosis of autism spectrum disorder (ASD) is currently made when the affected individual is around 2 years of age. Recently, Shen *et al.* used MRI to scan for brain anomalies in 33 children at high ASD risk and 22 children at low risk, all under 2 years of age. Children who developed ASD ($n=10$) had significantly elevated extra-axial fluid compared with non-ASD cases—a finding that was evident as early as 6–9 months of age.

Original article Shen, M. D. *et al.* Early brain enlargement and elevated extra-axial fluid in infants who develop autism spectrum disorder. *Brain* doi:10.1093/brain/awt166

MOTOR NEURON DISEASE

Neurotransmitter imbalance identified in ALS

Amyotrophic lateral sclerosis (ALS) is associated with an imbalance in excitatory and inhibitory neurotransmitters, according to a new study. Using 3-T proton magnetic resonance spectroscopy, Foerster and colleagues showed that patients with ALS have significantly lower levels of γ -aminobutyric acid, a marker of inhibitory neurotransmission, in the motor cortex than do healthy controls. Furthermore, patients receiving riluzole treatment had elevated levels of glutamate–glutamine, a marker of excitatory neurotransmission.

Original article Foerster, B. R. *et al.* An imbalance between excitatory and inhibitory neurotransmitters in amyotrophic lateral sclerosis revealed by use of 3-T proton magnetic resonance spectroscopy. *JAMA Neurol.* doi:10.1001/jamaneurol.2013.234

PARKINSON DISEASE

Medical therapy versus deep brain stimulation for advanced PD—long-term outcomes

In the first long-term study of treatment in patients with advanced Parkinson disease (average follow-up: 6 years), researchers have shown that subthalamic nucleus deep brain stimulation (STN-DBS) has longer-lasting efficacy on motor fluctuations than does medical therapy. However, whereas progression in other motor and cognitive domains were similar between the two groups, phonemic verbal fluency significantly worsened in the STN-DBS group.

Original article Merola, A. *et al.* Medical therapy and subthalamic deep brain stimulation in advanced Parkinson's disease: a different long-term outcome? *J. Neurol. Neurosurg. Psychiatry* doi:10.1136/jnnp-2013-305271