In Focus

Spotlight on the July 3 Issue

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Utility of MRI in spinal arteriovenous fistula

This study reviewed spine MRIs in 36 cases of spinal arteriovenous fistula and 32 controls with other myelopathies. Among patients with myelopathy, spinal angiography is mandatory in the presence of both T2 hyperintensity and flow voids but may be unnecessary if both of these findings are absent.

See p. 25

From editorialists Hartman & Rabinstein: "Only by knowing what we should be looking for will we be able to take full advantage of what MRI can reveal to us."

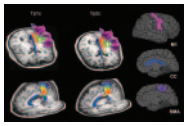
See p. 15

Subtherapeutic warfarin therapy entails an increased bleeding risk after stroke thrombolysis

Five hundred forty-eight stroke patients receiving IV rtPA were evaluated, with details about warfarin pre-treatment recorded. The data suggest a clinically meaningful increase in the risk for symptomatic intracranial and major systemic bleeding in patients with stroke thrombolysis receiving warfarin up to the day before stroke or later.

See p. 31; Editorial, p. 17

A new early and automated MRI-based predictor of motor improvement after stroke



This study investigates the structural plasticity of the contralesional motor network in 12 ischemic stroke patients using diffusion spectrum MRI. Acute measures of network integrity, combined with a routine motor score and age, were strong predictors of motor outcome at 6 months.

See p. 39

$GABA_B$-ergic motor cortex dysfunction in SSADH deficiency

The authors quantified the magnitude of excitation and inhibition in primary motor cortex in 8 patients with succinic semialdehyde dehydrogenase (SSADH) deficiency, their parents, 11 controls, and 8 healthy adults using single and paired pulse transcranial magnetic stimulation. The results point to $GABA_B$-based motor cortex dysfunction in patients with SSADH deficiency.

See p. 47

Randomized trial of deep brain stimulation for Parkinson disease: Thirty-six-month outcomes

Patients with advanced Parkinson disease were randomized to subthalamic nucleus or globus pallidus interna deep brain stimulation and followed for 3 years. While deep brain stimulation was effective long-term for motor function, nonmotor symptoms increased, affecting quality of life.

See p. 55; Editorial, p. 19

Contribution of major amyotrophic lateral sclerosis genes to the etiology of sporadic disease

Screening for *SOD1, TARDBP, FUS, ANG, ATXN2, OPTN,* and *C9ORF72* was carried out in 480 consecutive patients with sporadic amyotrophic lateral sclerosis (SALS) and in 48 familial index patients. The detection of double mutations in 2 patients raises the hypothesis that a multiple mutations model may explain genetic architecture of SALS.

See p. 66

FOSMN syndrome: Novel insight into disease pathophysiology

Clinical, laboratory, neurophysiologic, and pathologic assessments were undertaken in 5 patients with facial-onset sensory and motor neuronopathy (FOSMN) syndrome. Conventional neurophysiologic studies and novel threshold tracking transcranial magnetic stimulation techniques assessed the presence of cortical excitability. FOSMN syndrome is a primary neurodegenerative disorder with a distinct clinical phenotype and pathophysiologic mechanisms.

See p. 73

A double-blind, randomized, controlled study of botulinum toxin type A in MS-related tremor

Multiple sclerosis (MS) tremor is disabling, and no effective medical treatment exists. This study showed improvement in arm tremor severity after targeted botulinum toxin injections compared to placebo in 23 patients with MS. Writing, drawing, and drinking from a cup all improved, providing RCT evidence for a new treatment option for MS-related tremor.

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NB: Editorial: "Level of evidence reviews: Three years of progress," p. 13. To check out other editorials, point your browser to www.neurology.org.

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