

of Neurology, Children's Hospital Boston, Lahey Clinic, Burlington, MA, and Royal Children's Hospital, Melbourne, Australia. Ages ranged from 2 days to 18 years. Mononeuropathies in children are rare, constituting <10% of referrals for EMG. Most patients presented with tibialis anterior weakness and foot drop. Weakness of plantar flexion was seen in 31 (58%) patients. Numbness below the knee occurred in all patients able to describe the symptom. The causes of SN included trauma (13), iatrogenic mechanisms related to orthopedic surgeries (13), extrinsic compression and immobilization (6), tumors (7), vascular (5), idiopathic and progressive (4), infantile and nonprogressive (2), and presumed postviral (3). Motor conduction was abnormal in 44/53 (83%) peroneal nerve studies, and 35/51 (67%) tibial nerve. Sensory conduction studies were abnormal in sural nerve in 34 of 43 cases (70%), and in superficial peroneal nerves in 15/25 (60%). Needle EMG was abnormal in peroneal innervated muscles in all subjects, in tibial nerve innervated muscles in 43/51 (84%), and in the hamstrings in 18/29 (62%). Prognosis was variable and dependent on etiology and severity of nerve injury; good in traumatic and iatrogenic SN and poor in vascular or tumor cases. (Srinivasan J, Ryan MM, Escobar DM, Darras B, Jones HR. Pediatric sciatic neuropathies: a 30-year prospective study. *Neurology* March 15, 2011;76:976-980). (Response and reprints: Dr Jayashri Srinivasan, Department of Neurology, Lahey Clinic, 41 Mall Road, Burlington, MA 01805. E-mail: jayashri_srinivasan@lahey.org).

COMMENT. Electrophysiological studies are important in diagnosis of neuropathies in children but are limited by poor tolerance. MRI will become increasingly useful with higher resolution units. Causes of SN are more varied in children than in adults. Traumatic causes predominate.

HEADACHE DISORDERS

ROLE OF NEUROIMAGING IN RECURRENT HEADACHES

Researchers at multiple centers in Korea have retrospectively reviewed the records of all 1562 (male 724, female 838) new patients presenting with recurrent headaches in 9 Pediatric Neurology Clinics of tertiary hospitals. Headaches were classified according to the International Classification, 2nd ed. Neuroimaging was performed in 77.1% of patients, and overall, 9.3% (112/1204) were abnormal; 2.3% (5/214) in CTs, 8.6% (88/1022) in MRI, and 17.6% (19/108) in MRI and MR angiograms. The mean age of onset of headache was 8 years, the mean frequency of attacks was 13/month, and the mean duration of symptoms at presentation was 16 months. The highest yield was obtained in patients with an abnormal neurological examination, and 50% (9/18) were abnormal ($P<.001$). Lowest yields occurred when imaging was performed for changes in type of headache (12% [26/201]), neurologic dysfunction (10% [9/83]), recent onset of severe headaches (7% [12/171]), and demands of parent and physician (10% [21/208]). Surgery was performed in 0.9% patients who underwent neuroimaging, and in 9.8% with abnormal findings. Neuroimaging showed no significant relation with age, sex, headache type, age of onset, duration of symptoms, frequency, location, or intensity of headache ($P>.05$). The findings suggest that stricter guidelines are needed for neuroimaging in pediatric headache patients. (Rho Y-II, Chung

H-J, Suh E-S, et al. The role of neuroimaging in children and adolescents with recurrent headaches – multicenter study. **Headache** March 2011;51:403-408). (Respond: Dr Y-I Rho, Department of Pediatrics, Chosun University Hospital, 588 Seosukdong, Donggu, Gwangju 501-717, Korea).

COMMENT. Increased parental and physician demand, and fear of liability are some reasons listed for the excess use of neuroimaging in pediatric headache. Practice parameters include an abnormal neurological examination or history of neurologic dysfunction (Lewis DW et al. **Neurology** 2002;59:490-498). Routine imaging is not indicated in patients with a normal neurologic examination (Silberstein SD. **Neurology** 2000;55:754-762). Clinical predictors of space-occupying lesions include headaches of <1 month duration, absent family history of migraine, abnormal neurologic examination, gait abnormalities, and occurrence of seizures (Medina LS et al. **Radiology** 1997;202:819-824). MRI indications proposed by Maytal J et al (**Pediatrics** 1995;96:413-416) include atypical recurrent headaches, recent change in the character of the headache, persistent vomiting, abnormal neurologic findings, and occurrence in younger age groups. Straussberg R et al (Arch Neurol 1993;50:130) report 5 patients, ages 10 months to 4 years, with headache as the initial symptom of intracranial tumor, three having a normal neurologic exam. An abnormal neurologic examination is the strongest predictive factor for a brain tumor as a cause of headache but is not an essential criterion for MRI. Change in the type of headache is not a reliable factor.

DEMYELINATING DISEASES

CORTICAL LESIONS IN MULTIPLE SCLEROSIS

The presence and frequency of cortical lesions (CLs) in 24 pediatric patients with relapsing-remitting multiple sclerosis (RRMS) were compared to 15 adult patients with RRMS and 10 pediatric healthy controls, in a study at University Ospedale San Raffaele, Milan and other centers in Italy. Pediatric patients had shorter disease duration and lower disability than adults. On MRI DIR sequences 3-dimensional T1-weighted scans, white matter lesion number and volume did not differ between pediatric and adult patients. CLs occurred in 2 (8%) pediatric patients and 10 (66%) adult patients. After adjusting for age, gender, and disease duration, median CL volume and number of CLs were lower in pediatric than adult patients with RRMS ($p=0.0003$). All CLs in pediatric patients were located at the boundary between white and gray matter. CL formation is not likely to be an initial event in pediatric MS. (Absinta M, Rocca MA, Moiola L, et al. Cortical lesions in children with multiple sclerosis. **Neurology** March 2011;76:910-913). (Respond and reprints: Dr Massimo Filippi, Scientific Institute and University Ospedale San Raffaele, Via Olgettina 60, 20132 Milan, Italy. E-mail: massimo.filippi@hsr.it).

COMMENT. Cortical lesions are rare in pediatric patients with MS. Compared to adults, children with MS have a relative sparing of brain gray matter. Clinically, an earlier age of onset is associated with specific features including more frequent encephalopathy, seizures, and brainstem and cerebellar symptoms during the first event. (Waubant E, Chabas D. Pediatric multiple sclerosis. **Curr Treat Options Neurol**. 2009