

2004;43:269-275). (Respond: Dr Daniel J Cox, Box 800-223, University of Virginia Health System, Charlottesville, VA 22908).

COMMENT. Adolescent drivers with ADHD when treated with Concerta q.d. demonstrated less variability and performed significantly better throughout the day than when treated with immediate release MPH t.i.d. During the MPH t.i.d. treatment regimen driving performance deteriorated significantly by 8 PM., a time when adolescents are likely to be driving. Concerta-treated adolescents were less likely to brake inappropriately on the open road, their driving was less erratic, and they were less likely to run stop signals. The participants unblinded self-appraisals correlated significantly with the objective measures of driving performance on the simulator. ADHD is not only a school-based disorder, impacting behavior and learning, but also predisposes to accidental injuries related to bicycles and motor vehicles. Treatment benefits with the various formulations of MPH, amphetamines, and Strattera should consider the impact on risk of serious accidents in addition to school performance.

**Extended release methylphenidate (MPH) formulations in ADHD.** Once-daily doses of Metadate CD (MCD) and Concerta (CON) produced statistically different effects on measures of behavior and performance in children with ADHD as measured in a laboratory school setting (The Comacs Study) (Swanson JM, Wigal SB, Wigal T et al. **Pediatrics** March 2004;113:e206-e216). The formulation with the highest expected plasma MPH concentration had the most benefits at any point in time. MCD was superior in the morning, MCD and CON were equivalent in efficacy during the afternoon, and CON was superior in the early evening.

## NEOPLASTIC DISORDERS

### SYSTEMIC LYMPHOMA MIMICKING ADEM

The case of a 10-year-old immunocompetent male who initially presented with fatigue and ataxia following a viral illness, and MRI findings compatible with acute disseminated encephalomyelitis (ADEM), and who later was diagnosed with systemic lymphoma is reported from Children's Memorial Hospital, Chicago, Illinois. Brain MRI showed white matter signal abnormalities in frontal and parietal lobes, the right temporal lobe, and in the basal ganglia, cerebral peduncles, and left brachium pontis. CSF contained 7 white cells/mcL, protein 28 mg/dL, glucose 68 mg/dL, and negative cytology. Ataxia and fatigue improved following treatment with a 5-day course of methylprednisolone 20 mg/kg/day, and the MRI showed resolution of the lesions. An acute exacerbation of the fatigue and ataxia occurring within 1 month was unresponsive to IV immunoglobulin, and the patient was referred for a second opinion. Examination revealed a horizontal nystagmus, and left hemiplegia, left axillary lymphadenopathy, and halo nevi on the back. The white blood cell count was  $2.5 \times 10^3$ /mcL, serum lactate dehydrogenase 944 IU/L, and serum neopterin 58 (normal <10 nmol/L). CSF showed 12 wbc/mcL, protein 196 mg/dL, and glucose 66 mg/dL. MRI revealed new areas of abnormal signal in the right caudate head, basal ganglia, and internal capsule. T-cell lymphoma was diagnosed by supraclavicular lymph node biopsy, and confirmed by stereotaxic biopsy of the right caudate. Chemotherapy

and radiotherapy resulted in significant resolution of the tumor on MRI, but the patient died of overwhelming bacterial sepsis. (Bassuk AG, Keating GF, Stumpf DA et al. Systemic lymphoma mimicking acute disseminated encephalomyelitis. **Pediatr Neurol** 2004;30:129-131.) (Respond: Dr Bassuk, Children's Memorial Hospital, Division of Neurology, Box #52, 2300 Children's Plaza, Chicago, IL 60614).

**COMMENT.** The diagnosis of lymphoma should be considered in cases of ADEM that recur, deteriorate, or are accompanied by lymphadenopathy, halo nevi, elevated neopterin, lymphopenia, and elevated lactate dehydrogenase. The initial presentation in this case was typical for acute disseminated encephalomyelitis. The dramatic neurologic decline was unlike an ADEM recurrence, and the lymphadenopathy and laboratory findings led to the final diagnosis of occult systemic T-cell lymphoma.

**Cognitive outcome after treatment for primary CNS lymphoma** is evaluated in a cohort of 19 patients who were in complete remission after treatment with IV and intrathecal methotrexate followed by whole brain radiotherapy. (Harder H, Holtel H, Bromberg JEC et al. **Neurology** February 24, 2004;62:544-547). Cognition was impaired in 12 (63%) patients despite a complete tumor response, and the degree of impairment correlated with age. White matter abnormalities and cortical atrophy occurred in 14, and cortical atrophy correlated with cognitive functioning and age. The neurocognitive decline is multifactorial, including the disease itself, age-related comorbidity, and the toxicity of treatment (O'Neill BP. Editorial. **Neurology** 2004;62:532-533). The tumor infiltrates beyond the margins of the tumor bulk and may resemble encephalitis. The median age at diagnosis is 60 years, and many patients have other pathology. The risk of neurotoxicity with treatment increases with patient age, and chemotherapy and radiation have a synergistic toxic effect, especially when radiation precedes chemotherapy.

## **INFECTIOUS DISORDERS**

### **BRAINSTEM ENCEPHALITIS AND ADEM FOLLOWING MUMPS**

Clinical manifestations of brainstem encephalitis (BSE) with fever, decreased level of consciousness, and left facial and abducens paralysis developed 1 week after bilateral parotitis and mumps in a 4 year-old female child and were followed by symptoms of acute disseminated encephalomyelitis (ADEM) within 20 days of recovery from BSE. Recovery from ADEM followed treatment with glucocorticoids and IV immunoglobulin within 2 months. (Sonmez FM, Odemis E, Ahmetoglu A, Ayvaz A. Brainstem encephalitis and acute disseminated encephalomyelitis following mumps. **Pediatr Neurol** 2004;30:132-134). (Respond: Dr Sonmez, Karadeniz Technical University, Child Neurology, 61080 Trabzon, Turkey).

**Bell's palsy following use of inactivated intranasal influenza vaccine** in adults is reported from Switzerland (Mutsch M et al. **N Engl J Med** 26 February 2004;350:896-903). The nasal vaccine is no longer in use. In a case-control study of 250 patients with Bell's palsy and 722 controls, 68 patients with Bell's palsy (27.2%) and 8 controls (1.1%) had received the vaccine ( $P<0.001$ ). The risk was 19 times that in controls.