

Risperidone, the most commonly prescribed drug at the time of the monitored metabolic abnormality, was taken by 34 of the 45 (dose range 0.25-4.5 mg per day), 6 of 45 were taking olanzapine (2.5-15 mg/day), 4 quetiapine (50-600 mg/day), and 1 patient pimozide (2 mg). None was taking haloperidol at that time. Medication was for tics in 27 of the 45 children, aggression in 17, and as an adjunctive therapy for OCD in one child. Three of 73 children developed neurologic complications (akathisia in 1 taking haloperidol, acute dystonic reaction in 1 with haloperidol and in 1 with risperidone. None developed tardive dyskinesia, tremor, or Parkinsonism.

In boys treated with antipsychotic medication for tics, total cholesterol, low-density lipoprotein, high-density lipoprotein, and triglyceride levels were significantly higher than population-based levels for boys ( $p < 0.0001$ ). Girls had significantly lower high-density lipoprotein concentrations ( $p = 0.0033$ ). Odds of having lipid abnormalities were significantly higher in the 36 of 73 children with abnormal mass indices ( $p = 0.0004$ ). The 49% of overweight or obese children in this cohort of children treated with antipsychotics contrasts with 22.5% in the Canadian population-based sample. The long-term health consequences of obesity and lipid abnormalities are of concern, and risks and benefits of antipsychotic medication for tics should be carefully considered before initiating therapy. (Pringsheim T, Pearce M. Complications of antipsychotic therapy in children with Tourette syndrome. *Pediatr Neurol* July 2010;43:17-20). (Respond: Dr Pringsheim, Calgary Tourette Syndrome Clinic, 2888 Shagganappi Trail NW, Calgary, Alberta T3B 6A8, Canada. E-mail: [tmprings@ucalgary.ca](mailto:tmprings@ucalgary.ca)).

COMMENT. Children with Tourette syndrome requiring antipsychotic therapy should be monitored for abnormalities in lipid metabolism and weight gain.

## **TRAUMATIC DISORDERS**

### **BROWN-SEQUARD-PLUS SYNDROME AFTER STAB INJURY**

A 5-year-old boy suffered a stab wound to the back in the right paraspinal region that resulted in spinal cord injury at T2-T3 level and spinal shock. Bilateral paresis was present in lower limbs, absent superficial reflexes, retention of urine, and loss of bowel and bladder sensation. After methylprednisolone, normal saline, and phenylephrine for hypotension, his condition improved and exam at 8 days revealed spastic paresis of the right lower limb, absent vibration and position sensation below the nipple level on the right side, and loss of pinprick and temperature sensation in the left half of the body. He also had paralytic ileus, constipation, and loss of bowel sensation. A clinical diagnosis of incomplete spinal cord injury at T4 dermatome and Brown-Sequard-plus syndrome was confirmed by MRI. At 6 weeks he was weaned off vasopressor agents and he had partial recovery of power in the right lower limb and full recovery of sensations. (Issaivanan M, Nhlane NM, Rizvi F, Shukla M, Baldauf MC. Brown-Sequard-plus syndrome because of penetrating trauma in children. *Pediatr Neurol* July 2010;43:57-60). (Respond: Dr Baldauf, Division of Pediatric Critical Care, Department of Pediatrics, Brookdale University Hospital, One Brookdale Place, CHC-801, Brooklyn, NY 11212. E-mail: [mbaldauf@brookdale.edu](mailto:mbaldauf@brookdale.edu)).

COMMENT. Incomplete spinal cord injury and Brown-Sequard syndrome are adult disorders, but motor vehicle accidents and violence may be responsible in children. The authors cite 3 additional pediatric cases reported in the literature. High-dose steroids in 2 cases (including the present case) and surgery in 2 resulted in good to complete recovery.

## **POSTCONCUSSIVE SYMPTOMS AND NEUROCOGNITIVE FUNCTION AFTER MILD TBI**

The frequency, nature, and recovery from postconcussive symptoms (PCSs) after mild traumatic brain injury (MTBIs) are described in 28 patients, 10 to 17 years of age, and their neurocognitive function in the initial 4 to 5 weeks are compared with 45 injured controls without MTBIs, in a prospective, longitudinal study at University of Michigan, Ann Arbor, MI. MTBI patients reported significantly more PCSs than controls, and these persisted for weeks after injury but decreased significantly between 1 and 4 to 5 weeks. Symptoms included altered mental status or confusion in 11 (39%), dizziness in 23 (82%), nausea/vomiting in 19 (68%), incoordination (9), blurred vision (7), diplopia (4), and irritability in 3 (11%). Posttraumatic amnesia in 8 (29%) at baseline was not associated with an increase in PCSs or poorer neurocognitive function; trends during follow-up were identical for MTBI participants with and without amnesia. Patterns of recovery following MTBIs on a neurocognitive Trail-Making Test Part B differed significantly from controls, whereas other neurocognitive measures were not different. PCSs and neurocognitive deficits occur both in patients with MTBIs and in children with injuries other than brain trauma, but the symptoms are milder in the non-TBI patients and their recovery patterns are different on the Trail-Making Test Part B. (Sroufe NS, Fuller DS, West BT, Singal BM, Warschausky SA, Maio RF. Postconcussive symptoms and neurocognitive function after mild traumatic brain injury in children. *Pediatrics* June 2010;125:e1331-e1339). (Respond: Nicole S Sroufe MD, MPH, 1500 E Medical Center Dr, Room TC B1 380, Ann Arbor, MI 48109. E-mail: [nicole@med.umich.edu](mailto:nicole@med.umich.edu)).

COMMENT. Postconcussive symptoms decrease between 1 and 4 to 5 weeks after mild traumatic brain injury in children, and neurocognitive deficits resolve by 3 to 6 months after injury in the majority. Posttraumatic amnesia does not predict development of postconcussive symptoms or neurocognitive dysfunction. Children with injury other than traumatic brain injury may also have postconcussive-like symptoms and neurocognitive deficits but these are milder and recovery patterns are different.

A recent questionnaire, follow-up study (average 2 years after trauma) of children with head trauma (Glasgow Coma Score  $\leq$  8) in 38 families found persistence of paresis (16%), cranial nerve damage (13%), incontinence (5%), or incoordination (18%). Mental and cognitive problems were frequent, even in children with light head trauma and often manifested after release from hospital. Inferior performance in school in 26% was associated with frequent absences, and social withdrawal and aggressive behavior led to family tensions. (Kapapa T et al. *J Child Neurol* April 2010;25:409-422). Children with minor head trauma may have functional behavioral morbidity that reflects parental overreaction despite rarity of physical sequelae. (Casey R et al. *Pediatrics* 1986;78:497).