

Wang S-M, Hsu Y-W, Lin H-C, Chi C-Y, Liu C-C. Long-term cognitive and motor deficits after enterovirus 17 brainstem encephalitis in children. **Pediatrics** Dec 2006;118:1785-1788). (Respond: Ching-Chuan Liu MD MPH, Department of Pediatrics, National Cheng Kung University Hospital, 138 Sheng Li Rd, Tainan, 70428, Taiwan).

COMMENT. Nonpolio enterovirus infections are most common in young children, and are spread by fecal-oral and respiratory routes. Enterovirus 71 (EV71) causes hand, foot, and mouth disease or herpangina, but infection can progress to a polio-like, acute flaccid paralysis or brainstem encephalitis (AAP Red Book, 27<sup>th</sup> ed, 2006;284-5). The rate of CNS complications in Taiwan 1998 epidemic was estimated at 3.1 per 1000 EV71 infections, brainstem encephalitis the most common. The highest mortality occurs in patients with stage IIIB and pulmonary edema. Stage II, the most frequent, an isolated brainstem encephalitis, is characterized by myoclonus, ataxia, nystagmus, oculomotor palsies, and bulbar palsy, and stage IIIa, an autonomic nervous system dysregulation, with cold sweats, tachycardia, and hypertension. Close monitoring of cerebellar dysfunction, present in 10% of stage II cases at 3 years after hospitalization, is recommended. Prompt pulmonary resuscitation is necessary in stage IIIB cases, to prevent hypoxic-ischemic encephalopathy.

## **ATTENTION DEFICIT DISORDERS**

### **ATOMOXETINE-INDUCED ELECTROCARDIOGRAM CHANGES**

An 11-year-old boy with attention deficit hyperactivity disorder (ADHD) who developed palpitations and unusual cardiac repolarization changes on the electrocardiogram (ECG) during standard dose treatment with atomoxetine is reported from Parkview Clinic and Birmingham Children's Hospital, Birmingham, UK. The boy had no history of cardiac or other medical problems. He was previously treated with Concerta and developed tics. Atomoxetine was substituted in a dose of 40 mg (1.1 mg/kg/day). After 10 months treatment, he developed sensations of fluttering in his chest and pallor, with increasing frequency, about 3 times a week, in episodes lasting about 10 min each. These symptoms were not associated with exertion. The ECG showed sinus rhythm, with unusual repolarization changes after the T wave, and a QTc of 0.32 sec. Both symptoms and ECG abnormalities resolved after stopping the drug. The QTc when off the atomoxetine was 0.31 sec. An echocardiogram was normal. Although ECG testing is not mandatory during atomoxetine treatment for ADHD, further research is recommended to study long-term effects of atomoxetine on the cardiovascular system. (Rajesh AS, Bates G, Wright JGC. Atomoxetine-induced electrocardiogram changes. **Arch Dis Childhood** Dec 2006;91:1023-1024). (Respond: Dr AS Rajesh, Parkview Clinic, 60 Queensbridge Road, Moseley, Birmingham B13 8QE, UK).

COMMENT. Atomoxetine is a nonstimulant noradrenergic drug licensed for treatment of ADHD. In initial pediatric trials of atomoxetine, cardiovascular adverse events were rare, but in adult studies, palpitation was a significant side effect (3.7% vs 0.8%;  $p=0.037$ ). This appears to be the first report of atomoxetine-induced ECG repolarization changes with palpitations in a child. Abnormal blood pressure elevation is noted occasionally with atomoxetine in our own clinic, and has been reported by others (Dworkin N. **J Am Acad Child Adolesc Psychiatry** 2005;44:510; **Ped Neur Briefs** 2005;19:48).