

the head, but in response to immersion in hot water in 10% of cases. Spontaneous non-reflex complex partial seizures may occur later.

## PAROXYSMAL DISORDERS

### EVALUATION OF SYNCOPE IN AN EMERGENCY DEPARTMENT

The cause of syncope and diagnostic workup of 226 consecutive pediatric patients presenting at the emergency department were evaluated at the University of Liege, Belgium. Among 226 patients with the primary complaint of syncope, 144 were discharged and 82 were admitted to the hospital for further study. Neurocardiogenic syncope (NCS) was diagnosed in 181 (80%), and neurologic disorders in 21 (9%) included seizures in 18, viral meningitis in 1, narcolepsy (1), and stroke (1). Other causes included psychogenic in 8, cardiac in 5, breath-holding spells (4), intoxications (4), and hypoglycemia (1). Recurrences occurred in the psychogenic and cardiac groups. NCS was related to prolonged upright posture ( $p=0.0001$ ) and other predisposing factors such as heat, mild dehydration, menses, hyperventilation, cough, urination, etc. The lack of a trigger excluded NCS. Exercise-related syncope was usually cardiac ( $p=0.03$ ). Post-recovery symptoms such as fatigue, weakness, headache, and nausea were not indicative of a specific category. A neurologic deficit such as prolonged lethargy and confusion post-recovery was typical of a convulsive seizure or other neurologic problem ( $p<0.001$ ). An electrocardiogram (ECG) in suspected cardiac cases was relevant in 3 with conduction disorders; ECG was not performed in 132 (58%) patients with other syncopes. Most patients with suspected NCS had an EEG and 29% were admitted to hospital. Ancillary tests such as EEG, CT of head, blood analyses, echocardiography, and 24-hour Holter recording, performed in many cases as part of the general evaluation, were largely non-diagnostic. Psychiatric disorders (depression, anorexia nervosa, school phobia, hysteria) had occurred in 13 of 181 patients with NCS at follow-up. The history and physical alone will usually point to the diagnostic category and need for specific tests. (Massin MM, Bourguignon A, Coremans C, et al. Syncope in pediatric patients presenting to an emergency department. *J Pediatr* Aug 2004;145:223-228). (Reprints: Prof Martial Massin MD, Division of Pediatric Cardiology, CHR Citadelle (University of Liege), Boulevard du 12 e de Ligne, 1, B-4000 Liege, Belgium).

COMMENT. The history of the event is critical for determining a working diagnosis and management plan. Attention should be given to possible triggers, the duration of the episode, and the condition in the post-recovery phase. A goal-directed plan of work-up is essential to avoid multiple unnecessary tests and costly hospitalization. A similar conclusion was reached in a report of syncope cases experienced at the Royal Hospital for Sick Children, Glasgow, UK (McLeod KA, 2003; see *Ped Neur Briefs* May 2003;17:36-37). Patients with prolonged loss of consciousness, seizure, and post-ictal lethargy and confusion should receive an EEG, but routine EEG for suspected syncope had a  $<1$  in 300 positive yield in the Belgian report. ECG also had a low positive yield. Tilt-table testing is indicated in patients with recurrent episodes, and provides an early diagnosis of NCS, avoiding further tests (Strieper et al, 1994; see *Ped Neur Briefs* 2003;17:37).