HEADACHE DISORDERS

TREATMENT OF MENSTRUAL-RELATED MIGRAINE

A review and meta-analysis of therapy trials for menstrual-related migraine headache (MRM) and evidence-based recommendations for acute and short-term preventive treatment are reported from Toronto Western Hospital, ON, Canada. Nineteen prospective, double-blind, randomized controlled trials of medications for relief or prevention of MRM were included in the guideline. For 9 acute treatment trials that met inclusion criteria, outcome considered was pain response and pain-free response at 2 hours. For 10 short-term prevention trials, the response criteria were the incidence of MRM or number of headache days. Trials involved women aged 18 to 65 with a history of MRM in at least two or 3 previous regular menstrual cycles. Trial quality was based on US Task Force criteria. Grade B recommendations (good evidence to treat - benefits outweigh harms) for use of sumatriptan, mefenamic acid, and rizatriptan in acute management of MRM in adult patients. Grade B recommendations for premenstrual use of transcutaneous estrogen, frovatriptan, and naratriptan in preventive treatment of adults with MRM. Choice of evidence-based regimens for MRM is based on clinical considerations. (Prinsheim T, Davenport WJ, Dodick D. Acute treatment and prevention of menstrually related migraine headache. Evidence-based review. **Neurology** April 22, 2008;70:1555-1563). (Reprints: Dr Tamara Pringsheim, Movement Disorders Centre, Toronto Western Hospital, 399 Bathurst Street, Toronto ON M5T 258 Canada).

COMMENT. The above report concerns adults, and sumatriptan is much less effective against migraine in children and adolescents. Sumatriptan is not licensed for use in patients <18 years of age in the US. In 23 children, aged 8 to 16 years, a randomized placebo-controlled, crossover trial of oral sumatriptan in Finland showed no significant differences in pain relief, although 13 preferred sumatriptan. (Hamalainen ML et al. **Neurology** 1997;48:1100-1103). A failure of response to oral sumatriptan is reported by others. In contrast, a placebo-controlled, crossover trial in Germany found *nasal* sumatriptan to be effective and well tolerated in children over 8 years of age. (Ahonen K, Hamalainen ML et al. **Neurology** 2004;62:883-887) (Ueberall MA, Wenzel D. **Neurology** 1999;52:1507-1510). A search of the literature found no study of effects of triptans in children with menstrual-related migraine.

PAROXYSMAL HEMICRANIA

The clinical characteristics of paroxysmal hemicrania (PH) are reported in a series of 31 patients, ages 5-68 years (mean age 37), identified and followed prospectively at the National Hospital and the Hospital for Sick Children, Great Ormond Street, London, UK from May 1995 to January 2007. Pain was exclusively right-sided in 15 (48%) and exclusively left-sided in 15 (48%). The location of pain in the majority was the same as that recognized by the International Headache Society (IHS), 2004: temporal and orbital in 24 (77%), and retro-orbital in 19 (61%). Pain was also frontal in 55%, occipital in 42%, at the vertex in 36%, and located in other areas of the head, neck, and shoulders in some. Pain was

rated as severe in the majority, and the mean duration of an attack was 17 min. Cranial autonomic features, at least one required by IHS classification, involved lacrimation in 87%, conjunctival injection in 68%, rhinorrhea in 58%, and ptosis in 54%. Agitation or restlessness occurred in 80%. All patients responded to indomethacin, a sine qua non for paroxysmal hemicrania. MRI or CT scan obtained in 25 (80%) patients was normal in 16 (64%) and showed abnormalities in 9 (36%). Abnormal scans included vascular loop compressing the trigeminal nerve, ophthalmic A-V malformation, sphenoid wing meningioma, and ischemic lesions in basal ganglia and pons. The authors suggest that the IHS revise the diagnostic criteria for paroxysmal hemicrania to include a wider location for pain, and a more inclusive range of autonomic features. An indomethacin test should be given to any patient with lateralized discrete attacks of head pain with associated cranial autonomic symptoms. **Brain** April 2008;131:1142-1155). (Respond: Professor Peter J Goadsby, Headache Group, Department of Neurology, University of California, San Francisco, Box 0114, 505 Parnassus Avenue, San Francisco, CA 94143-0114, USA).

COMMENT. Paroxysmal hemicrania is classified as a trigeminal autonomic cephalgia and is defined by the IHS (2004) as a severe unilateral orbital, supraorbital or temporal pain, lasting 2-30 min, accompanied by ptosis, eyelid edema, conjunctival injection, lacrimation, nasal blockage or rhinorrhea. Attacks usually occur >5 times a day and respond to indomethacin. Both chronic and episodic variants are described. The disorder is rare, with estimated prevalence of 1 in 50,000. In one third of cases, a cranial structural cause may be defined, some responding to surgery. The cohort reported above comprised 4% of trigeminal autonomic cephalalgia cases seen in the same time period. The female preponderance usually reported was not seen in this series. In differential diagnosis, cluster headache differs from PH in affecting 3 males to 1 female, attacks last longer (30-180 min), and no response to indomethacin. PH is reported in association with migraine, cluster headache, trigeminal neuralgia and cough headaches. The authors link pathogenesis to posterior hypothalamic activation, similar to cluster headache. A correct diagnosis of PH and its differentiation from other autonomic cephalalgias are important because of the dramatic and rewarding response of PH to indomethacin.

SEIZURE DISORDERS

EFFECT OF SEIZURE CLUSTERING ON EPILEPSY OUTCOME

A prospective, long-term population-based study was performed to determine whether seizure clustering (3 or more afebrile seizures during a 24 hour period) is associated with drug resistance and increased mortality in childhood-onset epilepsy, in a study at University of Turku, Finland, and the Epilepsy Research Group, Berlin, Germany. At an average 37 years follow-up, 26 (22%) of 120 childhood-onset epilepsy patients had recorded clusters of seizures. Patients with clusters had at least one seizure per week at the initial stage in 63% vs 32% of those without clusters (P=0.0178) and during follow-up. During drug therapy, patients with clusters were (1) more likely to have drug resistant epilepsy compared to those without (42% vs 13%, P=0.01); (2) less likely to enter 5-year remission (P=0.0230); and (3) had a higher risk of death (42% vs 14%, P=0.0299). In contrast, patients with seizure clustering before but not during treatment showed no difference in seizure outcome or