# PEDIATRIC NEUROLOGY BRIEFS A MONTHLY JOURNAL REVIEW

# J. GORDON MILLICHAP, M.D., F.R.C.P., EDITOR

Vol.	19.	No.	9

September 2005

## HEADACHE DISORDERS

#### EFFICACY OF SYMPTOMATIC TREATMENT OF MIGRAINE

The evidence from randomized and clinical controlled trials concerning efficacy and tolerability of symptomatic treatment of migraine in children was reviewed by search of databases from inception to June 2004 at Erasmus Medical Centre, Rotterdam, and Vlietland Hospital, Vlaardingen, The Netherlands, In a total of 10 trials reviewed, 1575 patients kept headache diaries, and those whose headaches (HA) had declined by >50% were considered improved. Compared to placebo, acetaminophen (15 mg/kg) and ibuprofen (10 mg/kg) significantly reduced HAs at 1 and 2 hours after intake, and adverse effects were minor. Nasal-spray sumatriptan was more effective than placebo in reduction of HAs, but side effects, especially bad taste in 26%, were significantly more frequent. Intravenous prochlorperazine was more effective than intravenous ketorolac in the reduction of symptoms at 1 hour after injection. The effect of oral dihydroergotamine was not different from placebo. The authors conclude that acetaminophen, ibuprofen, and nasal-spray sumatriptan are all effective symptomatic treatments for acute migraine in children, but future studies should include quality of life and missed school days as measures of outcome in addition to HA reduction. (Damen L, Bruijn JKJ, Verhagen AP et al. Symptomatic treatment of migraine in children: a systematic review of medication trials. Pediatrics August 2005;116:e295e302). (Respond: Arianne P Verhagen PhD, Department of General Practice, Erasmus Medical Centre, PO Box 1738, 3000 DR, Rotterdam, Netherlands).

COMMENT. The results of acute and prophylactic management of migraine in children, using data from published reports, have also been reviewed by practice committees of the American Academy of Neurology and Child Neurology Society (Neurology 2004;63:2215-2224; Ped Neur Briefs Jan 2005;19:3-4). Similar to the Netherlands experience, researchers in the United States found ibuprofen effective and acetaminophen,

PEDIATRIC NEUROLOGY BRIEFS (ISSN 1043-3155) © 2005 covers selected articles from the world literature and is published monthly. Send subscription requests (568 US; 572 Canada; \$75 airmail outside N America) to **Pediatric Neurology Briefs - J. Gordon Millichap, M.D., F.R.C.P. Editor,** P.O. Box 11391, Chicago, Illinois, 60611, USA. The editor is Pediatric Neurologist at Children's Memorial Hospital and Northwestern University Medical School, Chicago, Illinois. PNB is a continuing education service designed to expedite and facilitate review of current scientific information for physicians and other health professionals. Fax: 312-943-0123. probably effective for acute treatment of migraine in children. Sumatriptan nasal spray was effective and was recommended for use in adolescents. Except for the calcium channel blocker, flunarizine, which is unavailable in the United States, trials of medications in the prophylactic management of migraine in children are inconclusive. These include anticonvulsants, antidepressants, antihistamines, and antihypertensive agents.

Medication-overuse headache. The overuse of analgesic medications is stressed as a factor in the development of rebound and chronic daily headaches (CDH), and the withdrawal of all headache medications is recommended in their management (Wiendels NJ et al. Headache 2005;45:678-683; Ped Neur Briefs July 2005;19:56). Used in moderation. non-steroidal anti-inflammatory analgesics are relatively safe and effective; when taken 15 days or more per month for 3 months or longer, they are likely to induce "medication overuse headache (MOH)" (Limmroth V, Katsarava Z, Curr Opin Neurol 2004;17:301-306). In Norway, the prevalence of CDH in the general population is 2 - 4%, and MOH accounts for one third of these cases; and 10% of the population is reported to take analgesics on a daily basis (Zwart JA et al. Neurology 2003;61:160-164). MOH is not only a problem of adults; it also occurs in children, even as young as 6 years (Hering-Hanit R et al. J Child Neurol 2001;16:448-449). MOH can result from overuse of any of the anti-migraine medications, including analgesics, triptans, ergots and medications containing barbiturates, tranquilizers, codeine and caffeine. A more general understanding of the risks of analgesic overuse should lead to a greater reliance on the recognition and avoidance of migraine triggers (Millichap JG, Yee MM. Pediatr Neurol 2003;28:9-15), and the support of controlled studies of prophylactic medications in childhood migraineurs.

A comparative multicenter study in adults treated at the onset of acute migraine found that a combination of acetaminophen, aspirin, and caffeine was significantly more effective than oral sumatriptan (Goldstein J et al. **Headache** Sept 2005;45:973-982). A further multicenter prospective study in adults found that a combination of naproxen sodium and sumatriptan in treatment of acute migraine was superior to therapy with either agent alone (Smith TR et al. **Headache** Sept 2005;45:983-991).

#### SEIZURE DISORDERS

### SERUM PROLACTIN IN DIAGNOSIS OF EPILEPTIC SEIZURES

The results of studies in databases and references concerning serum prolactin levels (PRL) in patients with suspected seizures were rated for quality and analyzed by members of the Therapeutics Subcommittee of the American Academy of Neurology. Eight prospective, controlled studies showed that an elevated PRL, measured at 10 to 20 minutes after a suspected event, was highly predictive of generalized tonic–clonic (GTCS) or complex partial seizures (CPS), and differentiated these epileptic from psychogenic nonepileptic seizures in adults and older children. Most studies used a PRL of at least twice baseline as abnormal (upper limits of normal in most laboratories was 18 to 23 ng/mL). Sensitivity was 60% for GTCS, and 46% for CPS, while specificity was 96% for both seizure types. Two studies showed elevated PRL levels after tilt-test-induced syncope, and PRL did not distinguish epileptic seizures from syncope. PRL data obtained after simple partial seizures, status epilepticus, repetitive seizures, and neonatal seizures were inconclusive. (Chen DK, So YT, Fisher RS. Use of serum prolactin in diagnosing epileptic seizures. Report of the