gens. Oral contraceptives are known to decrease protein S levels, thus causing a hypercoagulable state.9

Cerebral dural sinus thrombosis should be considered in the differential diagnosis of new onset of headache. Although there have been reports of CVT presenting as pseudotumor cerebri, to our knowledge this is the first case of hydrocephalus directly attributable to CVT. Intracranial hypertension resulting from acute hydrocephalus may be due to a tumefactive venous infarct of the cerebellum, precipitated by the thrombosis. A high index of clinical suspicion along with the utilization of modern imaging techniques, such as MR spectroscopy, MR venography, and DSA will set the diagnosis and spare both the patient and the physician from unwarranted procedures.10

REFERENCES


Hypnic Headache Responsive to Low-Dose Topiramate: A Case Report

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This is a clinical report of a 63-year-old woman, with a 3-year history of severe episodes of hypnic headache responding to low-doses of topiramate (25 mg at bedtime). Topiramate has been used at the dosage of 100 mg/day for hypnic headache prevention in one recent case report with benefit. This report confirms the efficacy of topiramate in hypnic headache even using low-dose regimen therapy.

Key words: hypnic headache, topiramate, lithium carbonate

Hypnic headache (HH) is a rare sleep-associated primary headache disorder, usually affecting the elderly. The current International Classification of Headache Disorders of The International Headache Society (IHS) classifies HH within the “other primary headaches” section.1 According to the IHS 2004 criteria, attacks of dull headache typically occur after the age of 50 years, more than 15 times per month and develop only during sleep. No autonomic symptoms are present and no more than one case of nausea, photophobia, or phonophobia; the attacks awake the patient during sleep and usually last more than 15 min after waking.

The pathophysiology of HH is still unclear. The strict association with sleep and the efficacy of drugs that can impact circadian rhythms such as lithium and melatonin suggest that HH may be a chronobiological disorder.2-3 No information on melatonin incretion rhythms in HH patients...
is, however, available to date. The best prophylactic treatment is lithium, but indomethacin, caffeine, and flunarizine may also be useful. Topiramate has been used in one case with beneficial effects: 100 mg/day were necessary to induce a clinical response. The mechanism to explain the headache reducing role of topiramate is possibly similar to the modulation of neuronal excitability of an hypothetical hypothalamic pacemaker.

We report a patient suffering from HH who responded to low doses of topiramate.

CASE REPORT

We report the case of a 63-year-old woman, affected by essential hypertension treated with valsartan (40 mg/day), hydrochlorothiazide (6.25 mg/day), and sotalol (40 mg/day). The patient reported a 3-year history of recurrent episodes of dull headache present on 15-20 nights/month which awakened her during sleep. The patient did not experience headache during afternoon naps. The location of pain was fronto-temporal, bilateral and it was not associated with nausea or photophobia. The attacks began usually between 1:30 AM and 2:30 AM and dissipated within 1-2 h after indomethacin and caffeine rectal administration although occasionally attacks lasted 4 h. During acute attacks blood pressure was normal. Clinical features of patient’s headache fulfilled the IHS 2004 diagnostic criteria for HH.

Neurological examination was unremarkable and prior diagnostic work-up included a brain magnetic resonance imaging that was normal. Blood and urine laboratory examinations were normal. A polysomnographic study did not disclose obstructive sleep apnea syndrome. Using an overnight polysomnography, one headache attack occurred during the first rapid eye movement (REM) stage of sleep; it was not associated with oxygen desaturation. Poor sleep quality was evident (4 arousals/hour). Prior treatment had included lithium carbonate (600 mg/day) and later on flunarizine (10 mg/day) without benefit. Topiramate was administrated with a 25 mg dose at bedtime. Headache attacks disappeared completely after 7 days. At 4 months’ follow-up, she no longer reported episodes of nocturnal headache nor adverse events. At this time, topiramate was discontinued; after 3-4 weeks of treatment interruption, nocturnal headache attacks resumed. Resumption of topiramate at 25 mg/day was followed by a complete relief from headache within 5 days.

DISCUSSION

Hypnic headache was first described by Raskin in 1988. All Raskin’s patients had a good response to lithium (300-600 mg at bedtime) and he hypothesized a link of this disorder to rapid eye movement phases of sleep, speculating that it could represent a perturbation of the “biological clock.” It has been suggested that, in predisposed subjects, an age-related impairment of suprachiasmatic nucleus could cyclically activate a disnociceptive mechanism leading to sudden awakening and headache.

Topiramate is an antiepileptic drug approved for migraine prevention. In HH, it has a possible role in modulating the abnormal activation of this hypothetical hypothalamic pacemaker, involved in regulation of sleep-wake cycles and in recurrence of attacks, has been proposed as a putative mechanism. Topiramate has been demonstrated to modify several receptor-gated and voltage-sensitive ion channels, including voltage-activated Na+ and Ca2+ channels and non-NMDA, involved in the pathophysiology of epilepsy and migraine. There is evidence that topiramate had a specific effect on GluR5 kainate receptors. It is also a weak inhibitor of carbonic anhydrase, particularly subtypes II and IV. In cultured hippocampal neurons, topiramate decreases low magnesium-induced bursting and blockaded voltage-dependent sodium channels, prolonging inactivation similarly to other putative sodium channel blockers (carbamazepine, phenytoin, or lamotrigine). The drug interacts with both glutamate receptors and γ-aminobutyric acid-A (GABA-A) receptors, inhibiting some different glutamate-receptor subtypes (AMPA/kainate receptors) and increasing the frequency of single GABA-A receptors channel opening mediated chloride currents. These properties may contribute to topiramate efficacy in epilepsy, migraine, cluster headache, and probably in HH.

Our patient was pain-free 7 days after topiramate was started at 25 mg/day dosage, but the headache attacks recurred with the discontinuation of treatment. For the complete abatement of nocturnal headache attacks, 25 mg/day of topiramate at bedtime were sufficient. Patient hypersensitivity to the drug may have explained the efficacy of the dose of 25 mg/day of topiramate. In consideration of the rarity of the pathology with few cases reported, it could also be plausible that 25 mg/day may represent the minimum effective dose of topiramate for HH treatment. Our report confirms the efficacy of topiramate in HH even using low-dose regimen therapy. These doses may reduce the incidence of adverse effects including cognitive changes, which could preclude this treatment for the elderly. This report suggests the use of topiramate as a safe effective treatment of HH in elderly patients.

REFERENCES

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A 76-year-old woman with a history of migraine presented with worsening headache. Computerized tomography brain scan and magnetic resonance imaging brain scan showed the presence of fat globules in the cerebrospinal fluid space. This appearance was suggestive of ruptured intracranial dermoid. She recovered spontaneously. While headache is a known presentation of ruptured intracranial dermoid, the condition is unusual to present in older people.

Key words: headache, ruptured intracranial dermoid, elderly

INTRODUCTION

Headache is a common symptom in the geriatric population. It has many causes, including depression and medication induced headache, apart from the usual causes common to all age groups. Headache due to chemical meningitis arising from a ruptured dermoid cyst is a uncommon in the geriatric population. This case report illustrates the importance of investigating for a cause when the nature of the headache changes. Our patient had long history of migraine; however, there was a change in the nature of the headache, which on investigation was found to be caused by a ruptured intracranial dermoid cyst.

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