Hemicrania Continua Responsive to Topiramate: Case Report

Topiramata Yanıtlı Hemikranya Kontünya

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ABSTRACT Hemicrania continua is an uncommon, unilateral primary headache syndrome that lasts all day and accompanied by cranial autonomic features. It is characterized by moderate to severe pain requiring pharmacological treatment and exquisitely responsive to indomethacin and this response is an essential feature in the diagnostic criteria. Unfortunately, indomethacin is associated with a number of side effects, most of them being gastrointestinal. Recently, new various drugs have been tried as alternatives to indomethacin in the patients who are intolerant to indomethacin. We report a patient with hemicrania continua who had marked epigastric symptoms with indomethacin treatment and responded remarkably well to topiramate 100 mg/day. Consequently, we suggest one of the newer antiepileptic drugs, topiramate, may be a good alternative for the preventive treatment of hemicrania continua, and believe that this report highlights the necessity to further search for this clinical condition.

Key Words: Headache disorders; topiramate

ÖZET Hemikranya kontünya sık görülmeyen, gün boyu süren, tek taraflı, kraniyal otonomik bulguların eklendiği primer baş ağrısı sendromudur. Farmakolojik tedavinin gerekli olduğu orta ve şiddetli ağrı ile karakterize olan bu baş ağrısı indometazine iyi yanıtlı olup; bu yanıtın olması aynı zamanda tanı kriterlerinden birisidir. Buna karşılık indometazin, çoğunlukla gastrointestinal olmak üzere pek çok yan etkilerle ilişkilidir. Yakın zamanlarda indometazin intoleransı olan hastalarda indometazine alternatif olarak çeşitli ilaçlar denenmiştir. Biz, indometazin tedavisiyle epigastrik semptomların gözlendiği günlük 100 mg topiramata belirgin olarak iyi yanıt veren bir hemikranya kontünya olgusu sunmaktayız. Sonuç olarak biz, nispeten yeni antiepileptik ilaçlardan biri olan topiramatı, hemikranya kontünya önleyici tedavisinde iyi bir seçenek olarak öneriyoruz ve yazımızın bu klinik durumla ilgili ileri çalışmalara gereksinim olduğunu düşündüreceğine inanıyoruz.

Anahtar Kelimeler: Baş ağrısı bozuklukları; topiramat

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Hemicrania continua (HC) is a relatively rare and under-recognized primary headache disorder characterized by a continuous, unilateral, moderate to severe headache that occurs in association with ipsilateral cranial autonomic features.

The exacerbations are often associated with ipsilateral cranial autonomic features including conjunctival injection, ptosis, eyelid edema, lacrimation, nasal congestion and rhinorrhea. Response to indomethacin is one of the current diagnostic criteria. The complete response to therapeutic

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doses of indomethacin is usually prompt and enduring in this headache disorder.

HC is likely a lifelong condition and withdrawal of the indomethacin treatment generally allows the symptoms reappear after a while.[1,2]

The treatment with indomethacin for a long period is limited by the potential for systemic toxicity and mostly gastrointestinal side effects. For these reasons, alternative drugs with a better-tolerated profile have been proposed for the preventive treatment. Many of them had produced consistent effects although this is not true in every patient they had been tried.[1,3,6,7]

Here, we report a patient with HC who was effectively treated with topiramate due to intolerance to indomethacin because of gastric side effects.

CASE REPORT

A 36-year-old man presented with 9-months' history of continuous, left sided persistent headache which was usually associated with ipsilateral lacrimation and ptosis but not with other autonomic features or migraine-accompanying symptoms, such as nausea, vomiting, photophobia or phonophobia. The continuous pain was non-pulsatile, pressing headache with severe intensity and maximally felt in the left orbital and supraorbital areas. The frequency of exacerbations was variable, 5 to 10 times in a week and lasting 45 min to 48 h. The headache has never occurred on the right side of the head. The headache was generally exacerbated by the lack of sleep and no other precipitating factors were noted.

The patient had no prior history of headache, head trauma or family history for headache. Previous treatments with amitriptyline, duloxetine and sodium valproate were ineffective. There were no abnormal signs on physical or neurological examinations on admission. Routine blood tests and magnetic resonance imaging of the brain were unremarkable.

HC was diagnosed and indomethacin 25 mg three times daily and gastroprotective therapy with ranitidinewere prescribed. The headaches immediately became much milder and completely abolished a few days later. After two months, the patient developed severe epigastric pain, indomethacin was stopped and the headache reappeared within 48 hours. Because of further pain episodes, he was started on topiramate with very slow titration to 100 mg daily.

During two months' follow-up, the patient noticed almost complete relief of pain episodes and reported no side effects. We attempted to slowly stop topiramate, reducing it by 25 mg monthly. In the next 2 months follow up, the dose was tapered to 25 mg twice a day, and the patient experienced exacerbations, as the ones he had been suffering previously. Hence, topiramate dose was gradually titrated to previous dose that made him completely pain-free, and he experienced no more headache episodes after two months.

DISCUSSION

We reported a patient who fullfils the criteria for HC, intolerant to indomethacin and remarkably responded to topiramate. The dose of topiramate needed for complete pain relief in this patient was less than generally needed for the antiepileptic effect of the drug in the epileptic patients.[4] This finding was similar to previously described case reports for the treatment of HC.[7] In the report of Camarda et al., the mean effective topiramate dose for HC was 100 mg/day. This dose appeared to be well-tolerated and after 1-year follow-up, the patient had good control of headache episodes.[5] Supporting these findings, our patient described no side effects related to treatment with topiramate. Furthermore, he experienced recurring persistent headache episodes after topiramate dose reduction.

HC causes considerable disability and severe nature of headache requires the use of effective acute and preventive treatment combinations. Indomethacin, prompt and effective specific treatment for HC, may cause severe gastrointestinal side effects in about 25% of treated patients, as happened in our case.[6] Peres and Silberstein reported 14 cases of HC who were unable to tolerate chronic

treatment with indomethacin.[8] Recently, alternative therapies with favorable pharmacokinetic properties and side effects such as the newer antiepileptic drugs have been suggested for the treatment of HC. Considering the response reported in some cases, antiepileptic drugs like gabapentin, valproic acid and topiramate are interesting options in patients with HC with contraindications or intolerance to indomethacin.[9,5,10]

Topiramate has multiple action mechanisms including voltage-sensitive sodium channel block, calcium channel inhibition, increase of potassium conductance, glutamate-mediated neurotransmission inhibition and carbonic anhydrase isoenzyme inhibition and has demonstrated antiepileptic activity. To date, it is not known which of these mechanisms of topiramate acts as a prophylactic treatment for various headache syndromes such as migraine, chronic tension-type headache, hypnic headache, chronic paroxysmal hemicrania and finally HC. The direct inhibition of trigeminocervical complex or the modulations of neurons that regulate sensory input have been proposed as possible mechanisms for topiramate's preventive action in these headache types.[11,12]

According to our findings, topiramate would be an interesting alternative option in patients with HC who have contraindication or intolerance to indomethacin. However, the result shown by the patient in the present study needs to be confirmed by larger controlled clinical trials and other case series.

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