Acta Neurol. Belg., 2011, **111**, 222-224

Primary headaches associated with sexual activity respond to topiramate therapy: a case report

Adalet ARIKANOGLU[1] and Ertugrul UZAR[2]

[1]Department of Neurology, Diyarbakir Education and Research Hospital, 21400, Diyarbakir, Turkey;
[2]Department of Neurology, Dicle University Faculty of Medicine, 21380, Diyarbakir, Turkey

Abstract

Primary headaches are rarely associated with orgasms. Indomethacin at doses of 25-50 mg/day taken 30-60 minutes prior to sexual activity may prevent headaches. Propranolol and metoprolole have been used for headaches that consistently emerge during frequent sexual activity of any type. It is also known that topiramate is useful for treating migraines, but it is rarely used for other primary headaches. The role of topiramate in the treatment of headaches associated with sexual activity is unclear. Indomethacin and propranolol could not be used in our patient who, besides sexual activity-associated headaches, suffered from gastritis and diabetes mellitus. Thus, topiramate (50 mg/day) was used prophylactically, and sexual activity-associated headaches did not recur during 6 months of topiramate therapy. This is the first report of positive response to topiramate as prophylactic treatment against sexual activity-associated headaches when propranolol and indomethacin are contraindicated.

Key words: Sexual activity-associated headache; topiramate; treatment.

Abbreviation

SAAH: sexual activity associated headache
MR: magnetic resonance
DM: diabetes mellitus

Introduction

Sexual activity-associated headache (SAAH) is a rare form of primary headache. Two groups of sexual activity-associated primary headaches are defined in the international headache classification (1). Type 1 or pre-orgasmic SAAH is a blunt headache that increases as a function of increasing sexual excitement. Type 2 or orgasmic SAAH is a sudden and intense headache occurring during orgasm. Propranolol and indomethacin are used for treatment of primary headaches associated with sexual activity (2). However, indomethacin and propranolol may be contraindicated in some patients. Topiramate is useful as prophylaxis of migraine. However, efficacy of topiramate in SAAH remains unknown. We present a patient with SAAH, for whom propranolol and indomethacin could not be used, but who responded well to topiramate therapy.

Case report

A 47-year-old male patient attended our hospital with complaints of headache following sexual activity. He had been married for 20 years and had experienced this symptom for 1.5 years. The patient stated that headache, which began during orgasm, was bitemporal, very intense, explosive, and lasted approximately five minutes. The headaches were not accompanied by nausea, vomiting, photophobia, or phonophobia. Headaches would occur during every kind of sexual activity. The patient had recently avoided sex due to this condition. He seemed shy and introverted, and had not previously consulted a doctor for this complaint. No personal or family history of primary headaches was found.

Systemic and neurological examinations of the patient, who had previously been diagnosed with diabetes mellitus (DM) and chronic gastritis, were normal. Cranial magnetic resonance (MR) and cerebral MR angiography were normal. The case was diagnosed as sexual activity-associated primary headache according to the international headache classification. Indomethacin and propranolol could not be administered because of chronic gastritis and DM, respectively. Topiramate (25 mg/day) was started prophylactically, and the dose was subsequently titrated up to 50 mg/day. No side effects

of topiramate were observed. At 6 months follow-up, our patient remained free of SAAH.

Discussion

Headaches rarely occur during sexual activity or orgasm. Pre-orgasmic headaches are characterized by a squeezing kind pain felt on the head and the nape of the neck. These headaches intensify as sexual activity continues. On the other hand, orgasmic headaches consist of explosive, sudden, and intense pain that develop during orgasm (3). Our case was considered as orgasmic headache on the basis of its onset at and continuation during orgasm. The majority of patients with SAAH also suffer from other primary headaches. Up to 25% of these patients also suffer from migraine, 20% describe benign exercise headache, and 45% tension headache (4). No other type of primary headache was present in our case. The duration of orgasmic headaches typically range from a few minutes to 24 hours, and intense headaches usually last less than 4 hours. The exact pathogenesis remains unclear, although recent studies suggest that segmental vasospasm may play a role (3). It has been noted that SAAH typically begins at 20-24 or 35-44 years of age, representing peaks of onset among younger and older age groups. The mean age at onset is 39.2 years (5), and this condition is seen in both sexes. A thunderclap headache can be symptomatic of several life-threatening conditions such as subarachnoid hemorrhage, reversible cerebral vasoconstriction syndrome and cerebral venous thrombosis. Hence, factors inducing secondary headaches must be excluded by differential diagnosis (3). In our case, cranial MR and MR angiography were normal. A lumbar puncture was not performed as normal MRA could rule out an aneurysm and the repetitive attacks without worsening did not favor a symptomatic headache. SAAH typically remains hidden as long as possible, particularly in countries with negative attitudes toward sex. Like in our case, patients tend to attend a doctor only when their quality of life worsens and they begin to abstain from sexual activity because of headache anxiety. Although the frequency of episodes depends directly on the frequency of sexual activity, some individuals do not experience a SAAH during every sexual activity (3, 5). In our case, headaches were reported to occur after all sexual activities. Doses of 25-100 mg/day of indomethacin taken 1-2 hours prior to sexual activity may prevent headaches (6). Use of triptans 30 minutes before sexual activity is also available as a short-term prophylactic for patients who do not tolerate, or respond to indomethacin (7). Daily propranolol, metoprolol, or diltiazem may work in patients experiencing regular and frequent attacks (6). In diabetic patients, beta-blockers bear the risk to mask symptoms of hypoglycemia (8). The antiepileptic drug topiramate is also used as migraine prophylaxis has also been used against other primary headaches including chronic daily headaches, trigeminal neuralgia, cluster-type headaches, short-lasting unilateral neuralgiform headaches, and primary cough headaches (9). Primary cough headaches resemble SAAH, and a vascular pathophysiological mechanism may underpin both conditions (10). So far, the effect of topiramate in SAAH was unknown. Our open-label experience in a single patient indicates that topiramate might be an alternative treatment of SAAH when beta-blockers and indomethacin are contraindicated, or ineffective. Further controlled studies should be designed to confirm this observation.

REFERENCES

1. Headache Classification Subcommittee of the International Headache Society. The international classification of headache disorders. 2nd ed. Cephalalgia. 2004;24(Suppl 1):1-160.
2. Frese A, Rahmann A, Gregor N, Biehl K, Husstedt IW, Evers S. Headache associated with sexual activity: prognosis and treatment options. Cephalalgia. 2007;27:1265-70.
3. Anand KS, Dhikav V. Primary headache associated with sexual activity. A case report. Singapore Med J. 2009;50(5):e176.
4. Frese A, Eikermann A, Frese K. *et al*. Headache associated with sexual activity: demography, clinical features, and comorbidity. Neurology. 2003;61:796-800.
5. Chakravarty A. Primary headaches associated with sexual activity some observations in indian patients. Cephalalgia. 2005;26:202-7.
6. Allena M, Rossi P, Tassorelli C, Ferrante E, Lisotto C, Nappi G. Focus on therapy of the Chapter IV headaches provoked by exertional factors:primary cough headache, primary exertional headache and primary headache associated with sexual activity. J Headache Pain 2010;DOI:10.1007/s10194-010-0261-9.
7. Frese A, Gantenbein A, Marziniak M, Husstedt IW, Goadsby PJ, Evers S. Triptans in orgasmic headache. Cephalalgia. 2006;26:1458-61.
8. Ter Braak EW, Appelman AM, van de Laak M, Stolk RP, van Haeften TW, Erkelens DW. Clinical characteristics of type 1 diabetic patients with and without severe hypoglycemia. Diabetes Care. 2000;23:1467-71.
9. Brighina F, Palermo A, Cosentino G, Fierro B. Prophylaxis of Hemicrania Continua: Two New Cases Effectively Treated With Topiramate. Headache. 2007;47:441-3.

10. Sandrini G, Tassorelli C, Ghiotto N, Nappi G. Uncommon primary headaches. Curr Opin Neurol. 2006;19:299-304.

Adalet Arikanoglu, M.D.,
Department of Neurology,
Diyarbakir Education and Research Hospital,
21400, Diyarbakir (Turkey).
E-mail: dradalet23@gmail.com