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Clinical Correspondence

Topiramate for the Prevention of Primary Headache Associated With Sexual Activity: The Third and Fourth Case Reports

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Primary headache associated with sexual activity (HSA) can occur at any sexually active age and is more common in males than females (1.2-3:1)[1] with a lifetime prevalence of about 1%.[2] To meet the International Classification of Headache Disorders (ICHD), 3rd edition criteria,[1] there must be at least 2 episodes of pain in the head and/or neck which are brought on by and occurring only during sexual activity lasting from 1 minute to 24 hours with severe intensity and/or up to 72 hours with mild intensity. The intensity increases with increasing sexual excitement and/or an abrupt explosive intensity just before or with orgasm. No other intracranial disorder is present. The headache is bilateral in two-thirds and unilateral in one-third of cases with a diffuse or occipital localization in 80%.

Based upon case reports, indomethacin or triptans 30 minutes before sexual activity can be effective to prevent the headache.[3,4] Based upon uncontrolled case reports, beta-blockers such as propranolol, metoprolol, and nadolol may be effectively taken daily for prevention for those with frequent attacks.[5,6] There are 3 cases reporting the efficacy of calcium channel blockers (1 of diltiazem[7] and 2 of nimodipine[8]). There are single positive case reports of nimodipine for migraine aura without headache[9] and lamotrigine for migraine with aura.[10] Topiramate might also be effective as these cases suggest.

This 50-year-old female presented with a 2-month history of having had 8 headaches, 7 occurring with orgasm (occurring about once every 4 orgasms), and once when lifting weights (she lifted weights 3 times a week). She described a bilateral nuchal-occipital throbbing without associated nausea, light or noise sensitivity. The intensity was 8/10 at the onset, 3/10 after about 3 minutes, and a duration of about 1 hour. She took a powder of 845 mg aspirin and 65 mg caffeine in water at the onset. She denied a history of prior headaches. Past medical history was negative. Neurological examination was normal. She was started on topiramate titrating up to 100 mg over 4 weeks. Magnetic resonance imaging and magnetic resonance angiogram of the head were negative.

In the first 2 weeks on topiramate 100 mg daily, she had significant trouble concentrating and the dose was decreased to 50 mg daily with less difficulty

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concentrating. At last follow-up 1.5 years after the onset, she had had 3 orgasmic headaches in the first few weeks after starting topiramate and none following. No further headaches with weightlifting.

A 64-year-old female reported a 3-month history of having had 10-15 headaches with orgasm described as a top of the head pressure with an intensity of 8-9/10 associated with nausea but no light or noise sensitivity or vomiting. She would take ibuprofen and the headache lasted 5 hours to 4 days with an average of 24 hours.

She had a prior history of headaches since childhood which had been daily for years described as a top of the head, bifrontal, and back of the head pressure and occasionally throbbing with an intensity of 3-8/10 with an average of 3-4/10 associated with nausea at times, vomiting occasionally, and light and noise sensitivity. About 6 times a year, she has a visual aura lasting about 5-6 hours where she saw wavy lines with scotoma for about 30 minutes. She took ibuprofen 800 mg 2-3 times per week and ½ coke per day which dulled the pain. Stress was a trigger. The headache would last 5-6 hours on most days. She had never been on triptans or a preventive medication. Past medical history of hyperlipidemia, anxiety, and depression. Neurological examination was normal. She was started on topiramate titrating up to 100 mg over 4 weeks and rizatriptan 10 mg at the onset of the headache. Magnetic resonance imaging and magnetic resonance angiogram of the head were negative.

When next seen 1.5 months later, she reported no further orgasmic headaches. The pre-existing headaches had decreased to 3 per week lasting for a few minutes without medication. She had fatigue and change in taste on topiramate 100 mg daily for 1 week which had been decreased to 75 mg daily. Topiramate was decreased to 50 mg daily because of mild adverse events. At last contact 2 month later, she was on topiramate 50 mg daily and had no further orgasmic headaches.

Both cases meet the ICHD criteria for HSA. The MRI/MRA scans of the brain were normal. It is critical to exclude aneurysmal subarachnoid hemorrhage (even after a second sex headache[11]) as sexual intercourse is the immediately preceding activity in up to 14.5% of cases occurring more often in males than females.[12] Reversible cerebral vasoconstriction syndrome (RCVS) can cause recurring thunderclap headaches just before or at orgasm with resolution within weeks.[13] The normal MRA scans and longer duration of the headaches in these 2 cases excluded RCVS.

Based on PubMed and Google searches, there are 2 prior case reports of topiramate for HAS prevention. Arikanoglu and Uzar reported a 49-year-old male with a 1.5-year history of HAS who had none at 6-month follow-up after the initiation of topiramate titrated up to 50 mg daily.[14] Bandini and Mauro reported a 55-year-old woman with a 4 months history of multiple HAS with a complete response to topiramate titrated up to 100 mg daily.[15] After 5 months, she had significant weight loss and stopped topiramate and the headaches recurred. She restarted topiramate 50 mg daily with no further headaches over the next 12 months.

Like the 2 previously reported cases, topiramate 50 mg daily was effective in these 2 new cases. Case 1 had HAS and also a headache associated with weight lifting which is a Valsalva or cough headache which rarely co-exist.[3] Case 2 had a history of migraine (which also had a rapid and excellent response to topiramate) which is co-morbid with HAS present in 5 out of 100 migraine patients compared to 0 out of 100 controls in 1 study.[16]

As the case studies are all uncontrolled, it is not possible to determine the actual efficacy of prevention as HAS has a good prognosis untreated with frequent spontaneous remissions. In a study of 60 patients, approximately 75% had episodic headaches (defined as at least 2 attacks occurring in ≥50% of sexual activity and then no attack for 4 weeks despite continuing sexual activity) and about 25% had a chronic course (ongoing attacks for ≥12 months without remission of ≥4 weeks).[17] During 3 years of observation, even the chronic cases had a remission rate of 69%.

Four case reports suggest that topiramate may be effective for the prevention of HAS and should be further studied.

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