

LETTER TO THE EDITOR

Hypomania complicating topiramate therapy for migraine prophylaxis

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Sir,

We report the case of a 30-year-old woman with no history of psychiatric disorder who developed hypomania whilst taking 200 mg of topiramate for migraine prophylaxis. Topiramate is one of the newer anti-epileptic agents used for migraine headache prophylaxis. It is generally well tolerated by patients. Most of the adverse effects of topiramate involve the central nervous system like the other anticonvulsant drugs. Side effects occurring around 10% of the patients include cognitive impairment, somnolence, ataxia, fatigue, confusion, slurred speech, impaired concentration and paresthesias [1]. A troublesome side effect of 'thinking abnormal' has been documented in 25–33% of the patients [2]. Psychotic episodes are not uncommon in patients receiving topiramate. Symptoms of psychosis in most instances were thought to be related to the rapid resolution of topiramate which occurs after the discontinuation of the drug. We now report the case of a 30-year-old female patient with no prior psychiatric history who developed hypomania whilst taking 200 mg topiramate for migraine prophylaxis. We here report a case of 30-year-old age lady with no prior psychiatric history who developed

hypomania whilst taking 200 mg topiramate for migraine prophylaxis.

Miss O. is a 30-year-old woman with long-standing migraine headaches. She had been maintained on propranolol HCl 80 mg/d for migraine headache prophylaxis. Because of the side effects of propranolol she could not be able to continue the treatment with propranolol. She was administered topiramate 100 mg/d for 1 month. As there was no response, the dose was increased to 150 mg/d. However, there was no improvement in her headache after 1 month. The dose was increased to 200 mg/d. At this dose, the patient was noticeably more verbally aggressive, had increased insomnia and a much higher energy level than usual, and noted increased interest in talking to people. Her electroencephalogram and MRI were normal. Her score on the Young Mania Rating Scale on admission was 25 points [3]. Topiramate therapy was ceased and her behavior and thought patterns returned to normal after the discontinuation of the treatment. She was administered flunarizine 10 mg/d for migraine prophylaxis instead of topiramate treatment.

Various medications have been used for the prophylactic treatment of migraine headaches. Topiramate is a well tolerated and efficacious medication for the prophylactic treatment of frequent migraine attacks. Topiramate is a second generation antiepileptic drug with actions on voltage-dependent sodium and calcium channels and excitatory amino acid receptors [4]. Most of its adverse events are related to the central nervous system.

A number of putative mechanisms by which topiramate exerts its effects have been identified. Together these actions result in a reduction of excitatory and enhancement of inhibitory neurotransmissions. Suppes [5] found no hypomania or mania as side effects in 142 bipolar patients that were treated with topiramate. McIntyre *et al.* [6] reported 36 patients with bipolar type I or type II having depressive symptoms. Both topiramate and bupropion decreased depression at these patients. Antidepressant effect of topiramate was found statistically significant. Schmidt do Prado-Lima and Bacaltchuck [7] also documented a single

case report; an antidepressant effect in a patient with unipolar depression. Kaplan [8] reported three cases of hypomania that developed with the use of topiramate. Antidepressants may cause mood switches because of releasing of monoamine neurotransmitters. The antidepressant effects of topiramate may cause hypomania possibly via release of monoamine neurotransmitters.

In conclusion, the current report suggests that topiramate-induced hypomania may occur with topiramate therapy for migraine headache prophylaxis. It's possible that hypomania is a drug-related phenomena and can be reverted by discontinuation of the medication. Dose dependency of cognitive or behavioral adverse effects of topiramate could not be elucidated from the published studies, as frequency of such effects were not differentially reported at various dose levels. Therefore, it cannot be concluded if these adverse effects are dose-related or idiosyncratic.

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