

Topiramate in the Treatment of Obesity Induced by Psychotropic Drugs in a Patient with Bipolar Disorder: A Case Report

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Abstract

Topiramate is an antiepileptic drug also used in the treatment of bipolar disorder. Several authors have reported the efficacy of topiramate in controlling the clinical manifestations of bipolar disorder and its ability to reduce the appetite, thus, the weight. Here, we present a case report showing a strong evidence of topiramate effectiveness in the treatment of obesity induced by psychotropic drugs. Our patient, a young woman suffering from bipolar disorder, was treated for 6 months with topiramate. Our clinical study demonstrates both the effectiveness of topiramate to control the clinical manifestations of bipolar disorder and to reduce the gained weight induced by mood stabilizers and antipsychotics in our bipolar patient.

Keywords: Bipolar Disorder, Topiramate, Obesity

Accepted March 03 2012

Introduction

The overweight and obesity are conditions that often occur in patients suffering from psychosis or affective disorders such as bipolar disorder. Multiple causes may be involved: from genetic interactions to lack of physical activity, from eating disorders to the wrong use of psychoactive drugs [1,2]. It is well known that different classes of psychoactive drugs, like antipsychotics, antiepileptics and some other antidepressants may induce significant weight gain [3,4]. This weight gain is associated with increased morbidity and mortality, which in psychiatric patients can be very marked. Therefore, the expectation of life in psychiatric patients is reduced to 20% compared to the general population [5,6].

Among the various psychotropic drugs used in the clinic, mood stabilizers significantly interfere with the mechanisms of food-intake control [7]. The neuromediators involved in the regulation of intake energy control and weight regulation, influenced by antiepileptic drugs, include glutaminergic, GABAergic, serotonergic, dopaminergic pathways and the neuropeptide Y system [8,9].

Basically, the first-generation of antiepileptic drugs used as mood stabilizers in bipolar disorder, such as carbamazepine and valproate in particular, tend to increase the appetite and the weight markedly whereas the second-generation an-

tiepileptic drugs, such as topiramate and zonisamide, to a lesser extent, tend to reduce food-intake, thus, to lose weight. Topiramate is a drug with ability to block sodium and calcium channels, to increase brain levels of GABA, AMPA receptor antagonist / kainate and to reduce glutamate-mediated excitation [10,11]. It is commonly used clinically in the treatment of epilepsy, but also as mood stabilizer in patients with bipolar disorder [12]. Several findings of the literature have reported a reduction in weight, both in patients treated for epilepsy than in patients treated for bipolar disorder [13-16]. Therefore, here we report the clinical case of a patient being treated with topiramate for bipolar disorder who had presented two years earlier in a marked weight gain induced by previous treatment with an antipsychotic and antimanic used as a mood stabilizer.

Case Report

Our patient A.C., 32 years old, who suffers from bipolar disorder according to DSM IV [17], for over 4 years, was treated pharmacologically, in the two years prior to our observation, with olanzapine (10 mg/day) as antimanic and valproate (1000 mg/day) as a mood stabilizer. Treatment with these drugs has significantly improved the symptoms, reducing the mood swings but they induced a progressive increase in the appetite and the weight, a weight gain of 9 kg in

18 months, going from a body mass index (BMI) of 24.5 to a BMI of 28.0 (Fig. 1). After about 18 months, we have been suspended olanzapine treatment confirming only valproate treatment (2000 mg/day) for further 6 months. Although her clinical picture has remained in good hand, the weight was further increased by 4 kg, bringing the BMI to 30 (Fig. 1). Despite the weight gain, we did not observe significant metabolic and cardiac abnormalities. In light of this clinical conditions, the therapy with valproate was suspended and replaced with topiramate treatment as mood stabilizer. Topiramate was administered at a dose of 25 mg/day for the first week, 50 mg/day for the second week and 100 mg/day by the third week. Throughout the observation period, lasting 6 months, our patient monitored both the weight and BMI. During the 6 months of topiramate treatment, our patient has maintained a good stabilization of mood, also, the patient lost 7 kg (BMI from 30 to 26.5) with an average reduction of about 1.2 kg per month (Fig. 1). Finally, topiramate treatment did not induce significant changes in blood and cardiovascular parameters, as well as side effects, whereas only during the first 3-4 weeks it was reported a sporadic headache and muscle fatigue.

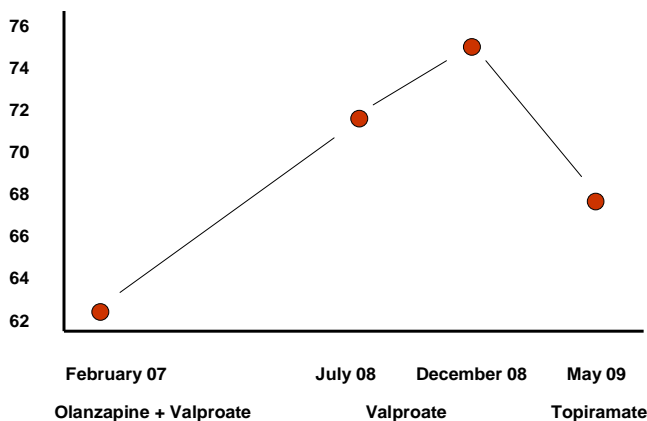


Figure 1. The effect of Olanzapine+Valproate, Valproate and Topiramate on the weight gain in the bipolar patient

Conclusions

Given the above results, topiramate appears to be a drug very useful in reducing weight in patients with bipolar disorder, as already reported in several evidences of the international scientific literature [13-16]. The results of our case report demonstrate that topiramate not only is able to control the typical symptoms of bipolar disorder but also to induce a significant weight loss induced by other psychoactive drugs, commonly used for the treatment of bipolar disorder, without causing significant side effects.

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