

## Successful Treatment of Binge Eating Disorder With Combination Phentermine/Topiramate Extended Release

**To the Editor:** Phentermine/topiramate extended release is a novel medication approved as an adjunct to a reduced-calorie diet and increased physical activity for chronic weight management in obese adults. To our knowledge, phentermine/topiramate extended release has not yet been evaluated in binge eating disorder, which often co-occurs with obesity. We therefore present 2 patients with binge eating disorder and obesity who experienced cessation of binge-eating behaviors and clinically significant weight loss with phentermine/topiramate extended release.

**Case 1.** Ms A, a 49-year-old woman, had a history of binge eating disorder since her early 20s. She could not recall any period in her life since binge eating disorder onset when she did not engage in binge-eating behaviors. At presentation for weight loss treatment, her only medication was atorvastatin for dyslipidemia. Ms A had repeatedly lost and gained weight with “yo-yo dieting” throughout her life. She reported binge eating 3 to 4 times per week, usually after dinner. Ms A also engaged in grazing behavior between meals and not being able to control these “mini binges” was very distressful for her. Her baseline body mass index (BMI) was 33.7 (kg/m<sup>2</sup>). She was started on phentermine/topiramate extended release 7.5/46 mg and lost 29.1 lb (13.2 kg) in 3 months to a BMI of 29.1. Ms A also reported complete cessation of her binge-eating behaviors, no urges to overeat, and lack of preoccupation with food. She did not follow any specific diet, ate preplanned balanced meals and snacks, and enjoyed all foods with no restriction. She met with a licensed independent social worker once monthly for supportive psychotherapy. Ms A reported no side effects while taking phentermine/topiramate extended release. She tolerated the medication very well and for the first time in her life felt “in control of my food.” Ms A chose to continue with phentermine/topiramate extended release and supportive psychotherapy, and, as of now, no further follow-up data are available on this case.

**Case 2.** Ms B, a 46-year-old woman, had a history of binge eating disorder since her teenaged years. She could not recall any period in her life since binge eating disorder onset when she did not engage in binge-eating behaviors. She had also been diagnosed and treated for depression in the last 11 years and was currently taking bupropion 300 mg/d and escitalopram 10 mg/d with little relief. Ms B reported very chaotic eating in the last 10 years. She engaged in emotional overeating; when under stress at work, she would impulsively buy candy bars from the vending machine and eat 2 or 3 at a time. At clinic presentation, Ms B described, on average, 3 binge-eating episodes per week; she would sneak food from her roommate and consume it in secret. She described the binge eating as shameful and very distressing. Her baseline BMI was 44.7. Ms B was started on 7.5/46 mg of phentermine/topiramate extended release at the end of April 2014, and the dose was increased to 15/92 mg in mid-July. In 3 months, she lost 19.8 lb (9 kg) to a BMI of 41.1. Ms B reported complete cessation of her binge-eating behaviors. She lost her taste for soda drinks and was able to eat structured meals and minimize mindless snacking. Ms B did not follow any specific diet along with phentermine/topiramate extended release, and she met with a licensed independent social worker for once-monthly supportive psychotherapy. Ms B reported no side effects while taking phentermine/topiramate extended release. She tolerated the medication very well, and the only concern she expressed was “what would happen when I stop the medicine . . . if I restart bingeing

again, this is terrifying.” Ms B chose to continue with phentermine/topiramate extended release and supportive psychotherapy, and, as of now, no further follow-up data are available on this case.

Phentermine/topiramate extended release has been on the market in the United States since 2012.<sup>1</sup> Despite the fact that topiramate has well-documented efficacy in binge eating disorder and obesity<sup>2</sup> and phentermine has been used in the United States for over 60 years for the short-term management of obesity as an appetite suppressant,<sup>3</sup> we were unable to locate any reports on phentermine/topiramate extended release in binge eating disorder.

The precise mechanism of action of phentermine/topiramate extended release in binge eating disorder is unknown. Phentermine reduces hunger centrally by modulation of norepinephrine release, and this might also contribute to its binge-eating-reducing properties. Topiramate is an antagonist at kainate/α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA) glutamate receptors. Animal studies have shown that stimulation of the lateral hypothalamus by glutamate agonists, including kainate/AMPA agonists, causes an intense, rapid, dose-dependent increase in food intake<sup>4</sup>; thus, topiramate might reduce binge eating by glutamate antagonism. How phentermine and topiramate individual mechanisms of action combine in successful treatment of binge eating disorder requires further study. Binge eating disorder is the most common eating disorder in both genders, its prevalence reaches 3% in community samples, and it is an underrecognized public health problem.<sup>5</sup> Novel treatments for binge eating disorder are needed.<sup>6</sup>

We therefore wish to draw attention to successful use of phentermine/topiramate extended release along with supportive psychotherapy in binge eating disorder and obesity, both of which are debilitating and decrease quality of life.

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