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CASE REPORT



Methylphenidate treatment for binge-eating disorder in a 12-year-old boy

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ABSTRACT

Binge-eating disorder (BED) is defined as frequent episodes of binge eating, and the subjective feeling of loss of control over food intake, in the absence of inappropriate compensatory behaviours. Although it is one of the most common eating disorders in adults, it is less common in childhood and adolescence, and literature about its diagnosis and treatment in children and adolescents is limited. Here, we report a 12-year-old boy, with BED, who had not responded to conventional therapies, and showed recovery with methylphenidate therapy. He had lost his mother a year ago, and had depression symptoms since then, and binge-eating episodes for the last 3 months. His depression symptoms were ameliorated in a month with fluoxetine 20 mg, but his binge-eating episodes continued with the same frequency and severity, despite the drug and cognitive behavioural therapy. Twice daily short-acting methylphenidate (Ritalin 10 mg.) was added then, and with ritalin, his binge-eating episodes were dramatically decreased in frequency. Over the years, various strategies and guidelines for treatment have been proposed for BED, especially in adults, including pharmacological and psychotherapeutic strategies. Stimulants were also used for BED. Lisamfetamine has been shown to reduce the frequency of exacerbations in adults with binge-eating disorders. There are case reports about methylphenidate use for bulimia nervosa (but not for BED) in adults, but to our knowledge, to date, there is not a case reported methylphenidate use for BED in children and adolescents in the literature. In conclusion, data from these reports suggest a possible benefit of using psychostimulants in the treatment of children respond poorly to conventional therapies. Clinical trials are needed to fully evaluate the efficacy and tolerability of psychostimulants in this respect.

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Binge-eating disorder;
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Introduction



In the new Diagnostic and Statistical Manual of Mental Disorders (DSM-5), binge-eating disorder (BED) is now categorized as a separate eating disorder, and is defined as frequent episodes of binge eating, and the subjective feeling of loss of control over food intake, in the absence of inappropriate compensatory behaviours such as self-induced vomiting, the use of laxatives, and excessive physical exercise [1].

Although BED is one of the most common eating disorders in adults [2], it is less common in childhood and adolescence [3] and literature about its diagnosis and treatment in children and adolescents is limited. Here, we report a 12-year-old boy, who presented to our clinic with BED, did not respond to conventional therapies, and showed recovery with methylphenidate therapy.

Case presentation

A 12-year-old boy was applied to our outpatient unit by his aunt, requesting for long-acting methylphenidate prescription. From his aunt, it was learned that he had

lost his mother 1 year ago because of cancer, and had been living with his father, aunt, and elder brother since then. He had irritability, social isolation, anhedonia, and school problems since his mother had passed away, and he had been on sertraline treatment for a few months with these symptoms. As his symptoms were ameliorated with sertraline, it was stopped 6 months ago. However, his symptoms increased just after the cessation of the drug and for the last 3 months, binge-eating episodes were added upon them. He was a little overweight before, but in the last 3 months, he gained 15 kg and became 67 kg. He had used to start a strict diet in the mornings and follow it all day, until his binge-eating episodes at nights. He had completely lost his control then and had eaten large amounts, even though he was not hungry, until he could not eat anymore. He had felt awful after eating episodes, and sometimes cried. He was applied to pediatric endocrinology, but all of his tests were within the normal limits and his physical examination revealed no abnormality. His aunt began to give him oros-methylphenidate, which had been prescribed for his elder brother with attention deficit hyperactivity disorder (ADHD), for appetite control. With 36 mg oros-

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methylphenidate, the frequency of his eating episodes had decreased significantly, and he had lost 6 kg. But with the beginning of the school period, his brother also needed the medication, so they decided to apply to our clinic for methylphenidate prescription.

On psychiatric examination, any symptoms of ADHD were not found. In the content of thought, prolonged bereavement findings and sense of worthlessness, hopelessness, and shame about being overweight were significant. Any inappropriate compensatory behaviours such as self-induced vomiting, the use of laxatives, and excessive physical exercise were not determined. His body perception was normal. His Child Depression Inventory score was 21. He was diagnosed with depression and binge-eating disorder, and 20-mg fluoxetine was initiated. Concurrent weekly cognitive behavioural therapy (CBT) sessions were also started. His depression symptoms were ameliorated in a month, but his binge-eating episodes continued with the same frequency and severity, despite the drug and CBT. Twice daily short-acting methylphenidate (ritalin 10 mg) was added then, so long as he promised to continue his previous treatment. With ritalin, his binge-eating episodes were dramatically decreased in frequency, and he is still on methylphenidate and fluoxetine treatment now.

The patient's father had given his written informed consent for publication of this case report.

Discussion

Over the years, various strategies and guidelines for treatment have been proposed for BED, especially in adults, including pharmacological and psychotherapeutic strategies. CBT is found to be effective in reducing the number of binge episodes [4]. Antidepressants are among the first drugs to be tested in the treatment of BED, where selective serotonin reuptake inhibitors are forefront [5]. Especially fluoxetine was reported to decrease weekly illness severity, frequency of binge episodes and clinician-rated depression, compared with placebo [6].

Topiramate and other antiepileptics have been shown to be beneficial. However, there is limited use due to cognitive side effects [7]. Stimulants were also used for BED. In a study conducted by McElroy et al., the use of lisamfetamine has been shown to reduce the frequency of exacerbations in adults with binge-eating disorders [8]. There are case reports about methylphenidate use for bulimia nervosa (but not for BED) in adults [9–12], but to our knowledge, to date, no case has been reported methylphenidate use for BED in children and adolescents in the literature. We thought that, our case, who did not respond to the fluoxetine and CBT, but responded dramatically to ritalin 20 mg/day in case of BED was unique in this respect.

In conclusion, data from these reports suggest a possible benefit of using psychostimulants in the treatment of children respond poorly to conventional therapies.

In the future, psychostimulants may be an approved treatment option for BED when evaluated with the reasonable side effects observed in the treatment of ADHD. Clinical trials are needed to fully evaluate the efficacy and tolerability of psychostimulants in BED in this respect.

Disclosure statement

No potential conflict of interest was reported by the authors.

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