

Lorazepam use in the treatment of pre-meal anxiety of anorexia nervosa: Three adolescent cases

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SUMMARY

The purpose of this case report was to explore the use of lorazepam, a benzodiazepine, for treating pre-meal anxiety in adolescent patients diagnosed with anorexia nervosa (AN). This study aimed to assess the effects of lorazepam on reducing anxiety, increasing food intake, and improving treatment adherence in these patients. Three cases of adolescent females with AN were presented, highlighting their clinical characteristics, treatment interventions, and outcomes. The patients received a combination of pharmacotherapy (fluoxetine, aripiprazole, and lorazepam) and psychotherapy (cognitive-behavioral therapy) as part of their treatment regimen. The dosage and duration of lorazepam administration varied for each patient based on individual needs. The introduction of lorazepam along with other medications resulted in a reduction in pre-meal anxiety and an increase in food intake among the patients. Furthermore, treatment compliance and motivation improved, leading to weight gain and resumption of menstrual cycles in all cases. Positive effects of lorazepam were observed even after discontinuation of the medication. This case report suggests that the use of lorazepam for treating pre-meal anxiety in adolescent patients with AN may be beneficial in reducing anxiety, enhancing treatment adherence, and facilitating healthy eating habits. However, due to the limited evidence available, benzodiazepines are not recommended as a first-line treatment for AN, and their usage should be cautious due to the potential risks of dependence and withdrawal. Further research is needed to evaluate the efficacy and safety of benzodiazepines, including different types and doses, for treating AN.

Key words: Anorexia nervosa, lorazepam, premeal, anxiety

INTRODUCTION

Anorexia nervosa (AN) is a severe psychiatric disorder marked by self-imposed caloric restriction, intense fear of weight gain, and significantly low body weight (1). It frequently manifests during adolescence and is associated with high morbidity and mortality. AN is often comorbid with psychiatric symptoms such as mood disorders, anxiety, obsessive behaviors, and cognitive rigidity (2). Effective treatment involves multidisciplinary interventions, with nutritional rehabilitation and psychotherapeutic support as the cornerstones (3). Pharmacotherapy is generally limited in efficacy, with SSRIs and antipsychotics offering modest benefits (4).

Benzodiazepines are a class of medications that

exert their anxiolytic effects through enhancement of the GABA-A receptor, leading to central nervous system inhibition [5]. While primarily used for anxiety and insomnia [6], benzodiazepines have been considered in AN, particularly for cases complicated by severe pre-meal anxiety that impedes food intake (7,8). Lorazepam, due to its short half-life and relative safety in lower doses, has been proposed as a potential adjunct in this context (9,10).

However, long-term use of benzodiazepines is discouraged due to risks including tolerance, dependence, and withdrawal (5,11). Clinical guidance generally does not recommend them as a first-line treatment for AN [11]. Despite this, selective short-term use may have utility in highly anxious patients struggling with refeeding and meal compliance (12,13).

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This case series describes the clinical course of three adolescent females diagnosed with AN who were administered lorazepam as an adjunctive treatment for pre-meal anxiety. Outcomes related to anxiety reduction, treatment compliance, weight gain, and resumption of menstrual cycles are discussed in light of existing literature. Symptom severity was monitored using the Eating Disorder Examination-Questionnaire (EDE-Q), a validated self-report scale assessing eating disorder-related thoughts and behaviors (14). The EDE-Q scores were recorded at baseline and again at the end of the eating disorder treatment process, following lorazepam discontinuation. This study was conducted in accordance with the Declaration of Helsinki, and ethical approval was obtained from the Ethics Committee of Ankara University Faculty of Medicine (Ethics Committee Decision No: İ06-462-24). Written informed consent was obtained from all adolescents and their parents for participation and publication of the cases.

CASE PRESENTATIONS

Case 1

A 15-year-old female high school student presented with a 13 kg weight loss over 10 months, resulting in a body mass index (BMI) of 15.3 kg/m². She followed a restrictive eating pattern, typically consuming only one meal per day, accompanied by binge episodes 3–4 times per week and subsequent self-induced vomiting. While she did not avoid eating in public, she restricted intake during the day and purged more frequently after family dinners, when her anxiety was at its peak. She reported three months of amenorrhea, guilt after consuming carbohydrate-rich foods, and a sense of relief following purging.

She was well-oriented and communicated openly. However, she reported persistent anxiety, distractibility, and fatigue, particularly in recent weeks. Her thought content included excessive concerns about weight gain and body image, consistent with underlying anxiety. She demonstrated partial insight into her condition. Based on DSM-5 criteria, she was diagnosed with anorexia nervosa, binge-purge subtype (1). She had no significant

medical comorbidities aside from malnutrition-related endocrine effects, and her laboratory findings were within acceptable limits. She was managed by a multidisciplinary team in an adolescent clinic. Nutritional rehabilitation included a structured diet plan under dietitian supervision, without formula supplementation. Fluoxetine (20 mg/day) was initiated and titrated to 40 mg/day, along with cognitive-behavioral therapy (CBT). Due to persistent purging, the fluoxetine dose was increased to 60 mg/day, and aripiprazole (2.5 mg/day, increased to 5 mg/day) was added.

Despite these adjustments, vomiting after dinner persisted. In CBT sessions, she could resist urges during the day but struggled during family dinners, where heightened anticipatory anxiety impaired her coping. Lorazepam 0.5 mg administered before dinner significantly reduced this anxiety, facilitated meal completion, and decreased vomiting. She gained 3 kg in one month. Lorazepam was tapered after four weeks. She continued fluoxetine and aripiprazole for eight months, ultimately gaining 8 kg, resuming menstruation, and demonstrating a reduction in her EDE-Q score from 45 to 9.

Case 2

A 13-year-old female was referred with a 13 kg weight loss over one year. At presentation, her weight was 35 kg, height 150 cm, and BMI 15.6 kg/m². Her diet was limited to water and coffee, occasionally supplemented by a single meal, along with compulsive calorie counting and excessive exercise. She reported binge eating approximately three times per week, typically followed by extended fasting periods. She demonstrated significant body image dissatisfaction, particularly with the appearance of her legs, and had experienced secondary amenorrhea for five months, which she appeared unconcerned about.

She appeared extremely weak, pale, and fatigued. Although well-oriented, she responded minimally during the interview and preferred silence, showing negativistic features. Her affect was dysthymic, and she displayed symptoms of depression. Her thoughts centered around fears of gaining weight and becoming fat. Despite this, she had insight into

her condition.

She was diagnosed with anorexia nervosa, restrictive type [1]. Apart from mild endocrine abnormalities related to malnutrition, she had no other significant medical comorbidities, and laboratory findings were within normal limits, supporting outpatient care. She continued follow-up in the adolescent clinic under a multidisciplinary team. Nutritional rehabilitation was based on a balanced meal plan supervised by a dietitian, without formula supplementation.

Fluoxetine was initiated but discontinued due to side effects. Sertraline was started and titrated to 75 mg/day, which improved social interaction but did not significantly enhance dietary adherence. Aripiprazole (2.5 mg/day, increased to 5 mg/day) was added, leading to partial improvement in dietary compliance. However, restrictive behaviors persisted, and she occasionally vomited after meals.

Lorazepam 0.5 mg was prescribed before lunch and dinner for eight weeks. This led to a notable reduction in pre-meal anxiety, improved adherence to the nutritional plan, and initial weight gain. Menstruation resumed within a few weeks. Lorazepam was tapered without recurrence of significant anxiety.

Over the following 12 months, she remained on sertraline and aripiprazole and continued regular psychiatric and dietary follow-up. She gained a total of 14 kg, and her EDE-Q score decreased from 55 to 10. EDE-Q was recorded at baseline and at the end of treatment, with the reduction aligning with clinical improvements in weight, menstruation, and anxiety symptoms.

Case 3

A 16-year-old 10th-grade female presented with severe weight loss, dropping from 52 kg to 39.5 kg over six months. She initially had a BMI of 22.5 kg/m² (72nd percentile). Her dieting began following bullying by male classmates who nicknamed her "Fat." She gradually increased her daily exercise to 40 minutes using online workout videos, while

secretly discarding food to avoid detection by her parents. Her BMI declined to the 1.46th percentile, accompanied by secondary amenorrhea, irritability, and resistance to treatment.

On physical examination, her hands were dry and yellowish, and her facial bones were visibly prominent. She wore a coat indoors to conceal her weight loss and appeared younger than her age. She was conscious and oriented but displayed temper tantrums and emotional lability. Her attitude toward the interviewer was hostile, with an irritable affect and depressed mood.

She was diagnosed with severe anorexia nervosa and comorbid major depressive disorder, with an initial EDE-Q score of 69. Apart from malnutrition-related endocrine abnormalities, she had no other medical comorbidities, and her laboratory results were within normal limits, supporting outpatient management.

She was treated by a multidisciplinary team. Nutritional rehabilitation was conducted through a structured diet plan without formula supplementation. Pharmacological treatment included fluoxetine (up to 50 mg/day), olanzapine (2.5 mg/day), and enhanced cognitive-behavioral therapy (CBT-E) involving active family participation.

Lorazepam 0.5 mg was prescribed before each main meal for three months. This intervention effectively reduced anticipatory anxiety and improved meal completion. Over time, she was able to overcome pre-meal anxiety and complete meals more consistently.

After six months, her weight increased to 48 kg (32nd percentile), and menstruation resumed at 46.5 kg. Her EDE-Q score decreased from 69 to 8.

CBT-E focused on restructuring negative cognitions, correcting body image distortions, and addressing affect regulation in relation to eating behaviors. Family support and structured meal monitoring were emphasized throughout treatment, contributing to long-term stabilization.

DISCUSSION

Despite advances in understanding AN, pharmacological treatment remains a challenge. The World Federation of Societies for Biological Psychiatry provides no definitive pharmacologic guidance for AN due to heterogeneous findings and lack of robust evidence (12). Studies examining SSRIs and antipsychotics have shown mixed results, especially regarding weight gain and core eating behaviors (4,13–15).

Traditional psychotropic approaches often overlook one of the most pressing barriers to refeeding: pre-meal anxiety. High levels of anticipatory anxiety are frequently observed in AN and are predictive of poor meal completion (10). A study assessing alprazolam found no benefit in reducing food intake in AN patients (7). However, low-dose lorazepam has shown some promise as a targeted intervention for meal-related anxiety without excessive sedation (9,11).

In this series, all three patients responded positively to lorazepam when used specifically to manage pre-meal anxiety. Notably, benefits extended beyond the treatment window—an important observation consistent with prior case reports (16,17). Lorazepam appeared to serve as a behavioral catalyst, reducing anxiety long enough for patients to develop more adaptive coping strategies via CBT.

These outcomes align with prior work linking pre-meal anxiety and intake deficits (10). Similar benefit was observed in a case of Avoidant/Restrictive Food Intake Disorder (ARFID)—a condition characterized by restrictive or avoidant eating behavior without body-image disturbance—treated with lorazepam for severe feeding avoidance, reinforcing its potential in restricted intake disorders (16).

Still, caution is warranted. Patients with the binge-purge subtype are at increased risk of substance misuse, and prolonged benzodiazepine use carries well-documented risks (5). In this series, lorazepam was used short-term (ranging from one to three months) under strict supervision.

Given these limitations, exploring non-benzodiazepine anxiolytics may be prudent. Buspirone, for instance, has been used in combination with SSRIs in AN patients with obsessive-compulsive traits (17), and another case highlighted its benefit in ARFID (18). While systematic studies are lacking, such alternatives warrant investigation, particularly in adolescents requiring long-term anxiety management.

The therapeutic model in this case series aimed not only to reduce symptoms but to build sustainable treatment behaviors. By targeting pre-meal anxiety during a critical window of nutritional rehabilitation, lorazepam may have facilitated behavioral change. This is consistent with theories suggesting that diminishing anticipatory distress enhances adherence to feeding plans, which can later be internalized (12,13).

This case series suggests that short-term, low-dose lorazepam can be a useful adjunct for managing pre-meal anxiety in adolescents with AN. In these cases, lorazepam improved anxiety symptoms, food intake, treatment adherence, and weight restoration. Importantly, benefits persisted after discontinuation, and no complications related to benzodiazepine use were observed. No adverse effects such as sedation, tolerance, dependence, or withdrawal symptoms were observed during or after lorazepam administration in any of the cases. The reductions in EDE-Q scores closely mirrored clinical improvement in all cases, including weight gain, return of menstruation, and reduction in pre-meal anxiety.

Nevertheless, due to the limited evidence and inherent risks, benzodiazepines should not be used as first-line treatments and should be administered only under strict supervision. Future randomized controlled trials are needed to assess the safety, efficacy, and optimal dosing of benzodiazepines and to explore alternative anxiolytic strategies such as buspirone in this population.

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