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Improvement of misophonia following fluoxetine treatment in an adolescent

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Dear Editor,

Misophonia is a disorder characterized by a reduced tolerance to certain sounds or stimuli associated with them (1). Sounds of eating, nasal sounds, chewing, breathing sounds, throat-clearing, rustling, and clicking sounds are commonly reported triggers (2). Misophonia is associated with anger, disgust, anxiety, avoidance, and functional impairment, and may clinically overlap with symptoms of autism spectrum disorder, anxiety disorders, and obsessive-compulsive disorder (OCD) (3). Evidence for the treatment of misophonia remains limited, and the existing literature largely consists of case reports, small case series, and early psychotherapeutic interventions (3,4). Although cognitive behavioral therapy, sound sensitivity training, and various pharmacological approaches have been reported, systematic evidence for their efficacy remains insufficient. Among pharmacological options, SSRIs, particularly fluoxetine and sertraline, are most frequently reported, whereas risperidone, methylphenidate, and propranolol have mainly been described in selected cases with comorbidities or prominent autonomic symptoms (4).

This report describes an adolescent with long-standing severe misophonia accompanied by prominent anxiety symptoms.

A 16-year-old boy was evaluated for marked sensitivity to eating sounds, avoidance, and prominent anxiety symptoms. His misophonia had persisted for approximately 6–7 years, progressively worsened, and substantially impaired daily functioning in recent years. The main triggers were eating-related auditory and visual stimuli, including chewing, lip-smacking, swallowing, and mouth and jaw movements; breathing sounds were additional triggers. Exposure elicited intense discomfort, restlessness, anger, disgust, and a strong urge to stop the stimulus. For the past several years, he had usually eaten alone in his room to avoid family members' eating sounds and mouth movements, markedly limiting his participation in family meals and family functioning.

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At baseline, his Amsterdam Misophonia Scale-Revised (AMISOS-R) score was 33/40 and Clinical Global Impression–Severity (CGI-S) score was 6. Prominent anxiety symptoms were also present, with a Beck Anxiety Inventory (BAI) score of 32. He reported death anxiety, intolerance of uncertainty, catastrophizing, heightened sensitivity to bodily symptoms, and reassurance seeking. Death-related anxiety had intensified after hospitalization for abdominal pain 3-4 years earlier. During this period, he feared dying, worried intensely that something might happen to family members, and checked at night whether his parents were breathing. Although contamination-related thoughts and handwashing were reported, these symptoms were subthreshold and were not considered the primary diagnostic focus. Sertraline was initially prescribed for severe misophonia and accompanying anxiety symptoms but was self-discontinued after 5-6 days because of nausea. It was therefore not considered an adequate trial in dose or duration. Treatment was switched to fluoxetine, initiated at 10 mg/day and increased to 20 mg/day after one week.

At the 1-month follow-up, partial clinical improvement was observed. The AMISOS-R score decreased from 33/40 to 22/40 and the CGI-S score from 6 to 4; the Clinical Global Impression–Improvement (CGI-I) score was 2. The nausea-related side-effect score was 2. Although misophonia persisted, emotional reactivity and avoidance in response to triggers had decreased from baseline.

At the 3-month follow-up, improvement was more pronounced. The AMISOS-R score decreased to 15/40 and the CGI-S score to 2; the CGI-I score was 1 and the side-effect score was 1. The BAI score decreased from 32 to 26. Although anxiety scores remained at clinically significant levels, fear of death, the interpretation of bodily sensations as threats, and the tendency to seek reassurance were less pronounced. During treatment with 20 mg of fluoxetine daily, misophonia, anxiety, and overall clinical severity decreased; the patient adapted better to family meals, and there were marked reductions in emotional reactivity to triggers and avoidance behaviors.

This case is noteworthy for the clinical improvement observed following fluoxetine treatment in severe misophonia symptoms that had persisted for 6–7 years, were accompanied by anxiety, and led to significant functional impairment. At the three-month follow-up, a marked reduction in the severity of misophonia was observed, while the reduction in anxiety symptoms was more limited. Although causality cannot be established, this suggests that fluoxetine may have contributed to the reduction in symptoms.

The treatment literature on misophonia remains limited and heterogeneous. A review noted that, until recently, no randomized controlled treatment trials had been published, and pharmacological interventions had not been systematically evaluated (5). Subsequent case reports have provided mixed evidence regarding pharmacological response. In one adolescent, combined fluoxetine and low-dose olanzapine was associated with a marked short-term reduction in misophonia severity (6). In another adolescent case, fluoxetine dose optimization improved mood and anxiety symptoms but had limited effect on misophonia, suggesting that misophonia should be considered a distinct clinical target independent of comorbid

anxiety and mood symptoms (7). The improvement observed in our case is consistent with a previous adolescent report of successful fluoxetine treatment (8) in which titration to 30 mg/day was associated with an approximately 40% reduction in misophonia severity and improved overall functioning at 4 months (8). Our case may further contribute to the limited pharmacological literature by demonstrating a similar clinical improvement at a lower fluoxetine dose.

The case series by Zai et al. demonstrated the heterogeneity of misophonia and its overlap with OCD. The subthreshold OCD symptoms in our case also support this association. Improvement was reported in three of five cases with CBT, mirtazapine, or sertraline, whereas fluoxetine–quetiapine was ineffective in one case and multiple SSRI/SNRI trials were ineffective in another (3). These findings suggest that pharmacological response in misophonia may be variable and that response to fluoxetine cannot be generalized to all cases. Nevertheless, the marked clinical improvement observed after fluoxetine treatment in our patient supports further evaluation of the potential benefits of serotonergic treatments in selected cases.

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