




LETTER TO THE EDITOR

A combination of fluoxetine and olanzapine for the treatment of an adolescent with severe misophonia

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Dear Editor,

Misophonia is characterized by excessive and disproportionate emotional, physiological, and behavioral responses to specific sensory stimuli, which vary from individual to individual. Despite being a point of contention between audiologists and neuropsychiatrists, emerging evidence suggests that misophonia may be a distinct neuropsychiatric disorder (1).

The etiology, symptomatology, and epidemiology of misophonia are still unknown, although various teams have proposed their own diagnostic criteria and therapeutic algorithms (2, 3). Given the symptomatic overlap between misophonia and Obsessive Compulsive Disorder (OCD), selective serotonin reuptake inhibitors (SSRIs) have been explored as a pharmacotherapeutic option (4, 5). This letter presents the case of an adolescent with severe misophonia who was successfully managed with a combination of olanzapine and fluoxetine. Informed consent was obtained from both the patient and his parents.

The patient, M., a 17-year-old male, revealed his struggles with misophonia during an interview accompanied by his mother (his father was prevented from being too close due to M.'s condition). Any sound originating from his father's mouth, nose, or throat elicited intense anger in M. His symptoms intensified upon observing any movement associated with the triggering noises, even the sounds themselves were not heard. He also experienced sleep disturbances

due to his condition, keeping other family members awake because of it.

When M. was 12 years old, his symptoms began after being exposed to his father's coughing, harrumphing, expectorating, and sniffing noises due to a respiratory infection. He managed to control his emotions and behaviors for two years. When he could no longer do so, he resorted to using headphones and listening to meditation or ney (a wind instrument) music to calm himself. After consulting a child psychiatrist, risperidone was prescribed to address his irritability. At the age of 15, he developed an intolerance to others' triggers, leading him to avoid public transportation and to school. He sought help from another child psychiatrist, who diagnosed him with adolescent problems and prescribed sertraline. His aggression escalated at 16 years old. His family filed charges against him 5-6 times, resulting in him spending a total of 5-6 months under the care of child welfare organizations. Due to the latest accusations by his family, the government is still investigating his case.

He was born healthy and full-term. After experiencing orofacial partial seizures at the age of 7, he was diagnosed with epilepsy and treated with oxcarbazepine for five years. He was also diagnosed with a motor tic disorder and received psychotropic medication that same year. At 12, levothyroxine 37.5 mcg was prescribed for hypothyroidism caused by oxcarbazepine. He has stopped taking his medication for some time due to misophonic complaints. No one in the family has a severe psychiatric disorder, although

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his mother exhibited a mild intolerance to the sound of water drops, but not as severely as the patient.

In the clinical examination and interview with M.'s mother, there was no clinical evidence found regarding autism spectrum disorder and intellectual disability. He scored 24 points on the Amsterdam Misophonia Scale (A-MISO-S), a scale derived from the Yale Brown Obsessive-Compulsive Scale by Schröder et al. (2), during the initial interview (the highest score). He was prescribed fluoxetine 10 mg (increased to 20 mg after one week) and olanzapine 2.5 mg. The A-MISO-S was reapplied after one month, and he scored 10 points. He has been allowing his father to come home and spend the night, and he uses headphones less frequently. At the second follow-up, he scored the same points on the A-MISO-S.

This is the first instance of fluoxetine and olanzapine being used in combination. The mechanisms by which SSRIs treat misophonic symptoms remain unclear. However, the effects of SSRIs on misophonia might be understood considering the high concentrations of serotonin and dopamine in the limbic system, as well as the functional connectivity between the limbic system and the primary auditory cortex (4, 5). Although the pathophysiology of OCD cannot fully explain misophonia, the Amsterdam group, who developed the A-MISO-S scale, pointed out similarities between these two disorders (2). Olanzapine was initially preferred for its sedative effects; however, given the irrational thoughts observed in misophonia, such as the belief that triggers are created intentionally, olanzapine also affects these thoughts.

Another important aspect of this case is that M. had motor tics. The relationship between Tourette Syndrome, tic disorders, and misophonia has been reported by Robinson et al. (6). The insula, a brain

region mentioned in discussions of both tic disorders and misophonia, suggests there may be a shared neurobiological mechanism between these disorders. Additionally, his being misunderstood by his family underscores the significance of this case. The lack of knowledge about misophonia among clinicians led to misdiagnoses, costing him and his family greatly in terms of legal charges, disputes, and involvement with the child welfare system.

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