Cognitive-Behavioral Therapy for 2 Youths With Misophonia

Joseph F. McGuire, MA; Monica S. Wu, MA; and Eric A. Storch, PhD

Misophonia is an impairing syndrome with typical onset during childhood and is characterized by extreme sound sensitivities to selective auditory stimuli that elicit avoidance, anxiety, irritability, and/or outbursts.[1–5] To date, there exists only 1 case report of cognitive-behavioral therapy (CBT)[6] and no published information on pharmacologic intervention for misophonia. Although Bernstein et al[6] demonstrated that misophonia-related symptoms could be managed with CBT when triggers are encountered, they did not objectively measure misophonia symptom improvement. We present the treatment of 2 youth who met the proposed criteria for misophonia[1] using objective rating scales and highlight CBT components used to address their symptoms.

Case 1. Ariel (pseudonym) was a 17-year-old Caucasian girl with no psychiatric comorbidity whose misophonia symptoms included irritability, anxiety, and avoidance in response to sniffing, heavy breathing, chewing, and tapping. Ariel experienced greater irritability/anger and distress when family and friends produced sound triggers relative to strangers, which led to a high level of symptom accommodation and her eventual school withdrawal. Although Ariel's stable medication regimen of venlafaxine (150 mg/d) and lisdexamfetamine (70 mg/d) was associated with slight improvement, she still experienced considerable impairment. Prior to treatment, Ariel completed the Misophonia Questionnaire and the Misophonia Severity Scale (Table 1).[2]

Case 2. Lilly (pseudonym) was an 11-year-old Hispanic girl with misophonia symptoms and no psychiatric comorbidity. Lilly's misophonia symptoms had become pronounced within the past year, caused her distress, and impaired family functioning. Lilly's triggers included sounds related to eating (slurping, lip smacking, chewing), breathing (heavy breathing, sniffing), tapping, and conversations in Spanish. Lilly vocalized distress/irritability and exhibited outbursts when triggers were produced by family members, but internalized distress/irritability with peers and teachers. Lilly's disruptive outbursts caused family members to eat in a separate room and minimize parental conversation around her. Lilly and her mother also completed the Misophonia Questionnaire[2] and the Misophonia Severity Scale[2] (Table 1).

Treatment. The initial treatment session entailed psychoeducation about misophonia and oriented patients to CBT. It was emphasized that the goal of treatment was to allow patients to tolerate sound triggers without engaging in aggressive or avoidant behavior (versus making the sounds pleasant). At the second session, a trigger hierarchy was developed, followed by gradual, repetitive, and prolonged exposures with response prevention at subsequent sessions. Through repeated exposures, the youths habituated to the distress associated with the sound triggers and learned that avoidant, aggressive, and/or distracting behaviors were not necessary to reduce distress. For instance, a sniffing exposure might have begun by identifying a target range for the frequency and/or loudness based on the initial distress rating. Exposures would be titrated upward in frequency, intensity, and proximity based on habituation. Eventually, the sound trigger would switch from therapist to family members, and the process would recalibrate based on distress rating and titrate upward.

A reward hierarchy was implemented with Lilly to reinforce successful completion of exposures. Cognitive restructuring was utilized to help the youths identify and restructure dysfunctional beliefs related to sounds experienced during exposures and at home (eg, "My family makes these sounds to annoy/aggravate me" was restructured into "This is an opportunity to practice exposures"). As the youth progressed on their treatment hierarchy, family accommodation was reduced in a stepwise fashion. Relapse prevention strategies were addressed in the final sessions.

Table 1. Treatment Duration and Misophonia Symptom Severity Ratings

	Ariel		Lilly	
	Pretreatment	Posttreatment	Pretreatment	Posttreatment
Misophonia rating scale scores				
Self-Report Misophonia Questionnaire[a]	55	37	31	25
Self-Report Misophonia Severity Scale[b]	12	7	5	4
Parent-Report Misophonia Questionnaire	…	…	43	26
Parent-Report Misophonia Severity Scale	…	…	6	4
Therapy sessions	No. of Sessions		No. of Sessions	
Acute CBT	6		13	
Follow-up CBT	4		5	

[a]The Misophonia Questionnaire has a range of possible scores of 0–68.
[b]The Misophonia Severity Scale has a range of possible scores of 1–15 and was designed to parallel the National Institute of Mental Health Global Obsessive-Compulsive Scale.[7]
Abbreviation: CBT = cognitive-behavioral therapy.

After treatment, Ariel experienced a large reduction in misophonia symptoms (Table 1). Although still experiencing some symptoms, Ariel stated that she possessed the tools to manage challenging environments and took steps to return to a public education setting. Lilly and her mother also reported a marked reduction in misophonia symptoms after treatment (Table 1). Lilly's mother stated that Lilly's symptoms no longer disrupted family functioning and family accommodation was almost nonexistent. While these findings are promising, further research is needed to replicate these results, increase the availability of CBT for misophonia, and clarify the association between misophonia and severe tinnitus.[8]

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Drug names: lisdexamfetamine (Vyvanse), venlafaxine (Effexor and others).

Corresponding author: Joseph F. McGuire, MA, Department of Psychology, University of South Florida, 4202 E Fowler Ave, PCD 4118G, Tampa, FL 33620 (jfmcguire@mail.usf.edu).

Author affiliations: Departments of Psychology and Pediatrics, University of South Florida, Tampa (all authors); Departments of Psychiatry and Behavioral Neurosciences, University of South Florida, Tampa (Dr Storch); Rogers Behavioral Health–Tampa Bay (Dr Storch); and All Children's Hospital, Johns Hopkins Medicine, Baltimore, Maryland (Dr Storch).

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