A Case of Bipolar Disorder and Misophonia

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Misophonia refers to a condition in which repetitive, pattern-based sounds such as chewing or pen clicking act as triggers, leading to abnormally strong aversive emotional responses and behavioral reactions.[1,2] Misophonia has been linked to obsessive-compulsive disorder,[3] tic disorders,[4] posttraumatic stress disorder, and suicidality.[5] However, there are no reports of misophonia in patients with bipolar disorder. We describe a case of chronic and severe misophonia in a patient with bipolar II disorder.

Case Report

Ms A is a 43-year-old single mother who has been seen in our clinic for 16 years. She was initially referred during her only pregnancy for follow-up care for bipolar II disorder. Her past psychiatric history was notable for obsessive-compulsive disorder and panic disorder.

She attends our clinic every 2–4 months. With the exception of occasional brief episodes of mild depression, her mood has been fairly stable for several years. She has not required a psychiatric hospitalization, has not had any suicide attempts, and has been functioning at a good level. She has not had a recurrence of obsessive-compulsive disorder or panic disorder. Her current medications include lithium 600 mg, quetiapine 125 mg, temazepam 30 mg, and carbamazepine 800 mg/day. She also takes primidone 250 mg/day for hand tremor. There is no history of alcohol abuse or use of illicit drugs.

Following an informal inquiry into the prevalence of misophonia in patients with bipolar disorder seen at our clinic, Ms A endorsed a history of these symptoms since childhood. The symptoms grew progressively worse and peaked when she was 19 years old. She recalled being unable to sleep on family trips due to the sound of her parents' snoring and breathing. She found herself becoming increasingly intolerant of crunching and chewing sounds. Other triggers included coughing, choking, clicking of a computer mouse, rubbing of fingers, and cracking of knuckles. In response to these sounds, she would often get irritated and express aggression toward inanimate objects. As an adult, the misophonia significantly impacted her quality of life, as she was unable to share a room with her child, eat with her family, or retain a job. Her family history was positive for major depressive disorder and bipolar disorder. She was unaware of any family history of misophonia.

On the Amsterdam Misophonia Scale,[6] a 6-item scale (score range, 0–24) adapted from the Yale-Brown Obsessive-Compulsive Scale,[7] she scored 17, indicating severe misophonia. Figure 1 provides details of the Amsterdam Misophonia Scale. There was no correlation between misophonia and symptoms of obsessive-compulsive disorder in the past. Similarly, there was no change in the intensity or frequency of misophonia during euthymic intervals; however, there was a clear worsening of these symptoms during the depressive episodes with mixed features.

Discussion

Misophonia appears to be a common entity. A study[8] of 483 undergraduate students at the University of South Florida showed that 19.9% of participants experienced misophonia symptoms that significantly interfered with their lives. A replication of this study found that 6% of individuals experienced misophonia, leading to severe functional impairment.[9] Further, a large-scale study[5] of 300 patients with misophonia showed that 45% of their symptoms started in childhood, and 75% of patients stated that symptoms worsened over time. The presence of misophonia in the pediatric population has been investigated, with an emphasis on the potential for early intervention.[10] However, the current literature on treatment of misophonia is limited. A few case reports[11,12] have shown cognitive-behavioral therapy (CBT) to be effective in reducing symptom severity. A study[10] of 90 misophonic patients reported that CBT improved misophonic symptoms in 48% of patients. Although promising, these studies are limited by sample size and lack of follow-up and a control group. Nevertheless, the significant impairment experienced by misophonic patients warrants further research into potential interventions and treatments.

There is little consensus on the nosologic status of misophonia. It has been suggested that misophonia may be an independent psychiatric disorder with a distinct diagnostic criteria and psychopathology,[6] while an alternative hypothesis suggests that misophonia is a cluster of symptoms that manifests across a variety of psychiatric disorders.[13] Based on a study[6] of 42 Dutch self-referred misophonic patients, it was found that patients with misophonia showed common predictable triggers and strong patterns of avoidant behavior that resulted in significant social dysfunction.

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Prim Care Companion CNS Disord 2020;22(3):19l02523

To cite: Sharan R, Sharma V. A case of bipolar disorder and misophonia. *Prim Care Companion CNS Disord*. 2020;22(3):19l02523.

To share: https://doi.org/10.4088/PCC.19l02523

Figure 1. Amsterdam Misophonia Scale (A-MISO-S)[a]

CURRENT SEVERITY OF MISOPHONIA SYMPTOMS

This rating scale is designed to rate the severity and type of symptoms in patients with misophonia. In general, the items depend on the patient's report; however, the final rating is based on the clinical judgment of the interviewer. Rate the characteristics of each item during the prior week up until and including the time of the interview. Scores should reflect the average (mean) occurrence of each item for the entire week.

List of misophonic sounds, that trigger the most irritation, anger or disgust:

-
-
-

1. **How much of your time is occupied by misophonic sounds?** (How frequently do the (thoughts about the) misophonic sounds occur?)

None	☐	0
Mild, less than 1 hr/day, or occasional (thoughts about) sounds (no more than 5 times a day).	☐	1
Moderate, 1 to 3 hrs/day, or frequent (thoughts about) sounds (more that 8 times a day, most of the hours are unaffected).	☐	2
Severe, greater than 3 hrs and up to 8 hrs/day or very frequent (thoughts about) sounds.	☐	3
Extreme, greater than 8 hrs/day or near constant (thoughts about) sounds.	☐	4

2. **How much do these misophonic sounds interfere with your social or work (or role) functioning? (**Is there anything that you don't do because of them? If currently not working determine how much performance would be affected if patient were employed.)

None	☐	0
Mild, slight interference with social or occupational activities, but overall performance not impaired.	☐	1
Moderate, definite interference with social or occupational performance, but still manageable.	☐	2
Severe, causes substantial impairment in social or occupational performance.	☐	3
Extreme, incapacitating.	☐	4

3. **How much distress do the misophonic sounds cause you?** (In most cases, distress is equated with irritation, anger or disgust. Only rate the emotion that seems triggered by misophonic sounds, not generalized irritation or irritation associated with other conditions.)

None	☐	0
Mild, occasional irritation/distress, not too disturbing.	☐	1
Moderate, disturbing irritation/anger/disgust, but still manageable.	☐	2
Severe, very disturbing irritation/anger/disgust.	☐	3
Extreme, near constant and disabling anger/disgust.	☐	4

(continued)

Although misophonia shares features with specific phobias, obsessive-compulsive disorder, posttraumatic stress disorder, and autism spectrum disorders, the pattern of symptoms found in misophonia did not fit into the diagnostic criteria of any of these disorders, suggesting that misophonia should be considered a separate diagnosis.

In 1 study,[5] patients with no comorbid psychiatric disorders showed less severe misophonic complaints, suggesting that the progression and severity of misophonia may positively correlate with comorbid psychiatric conditions. Our patient continued to struggle with symptoms of misophonia in spite of having prolonged euthymic intervals. These symptoms were severe enough to interfere with her relationships and quality of life.

Although there are no neurophysiologic studies of misophonia in the context of bipolar disorder, dysfunction of the auditory processing system has been described in both disorders.[14,15] Furthermore, research[16] showing impaired auditory gating in bipolar disorder has suggested that patients with bipolar disorder are already hypersensitive to

Figure 1 (continued).

4. **How much of an effort do you make to resist the (thoughts about the) misophonic sounds?** (How often do you try to disregard or turn your attention away from these sounds? Only rate effort made to resist, not success or failure in actually controlling the thought or sound.)

Makes an effort to always resist, or symptoms so minimal, doesn't need to actively resist.	☐	0
Tries to resist most of the time.	☐	1
Makes some effort to resist.	☐	2
Yields to all (thoughts about) misophonic sounds without attempting to control them, but does so with some reluctance.	☐	3
Completely and willingly yields to all obsessions.	☐	4

5. **How much control do you have over the misophonic sounds?** (How successful are you in stopping or diverting your thinking about the misophonic sounds? Can you dismiss them?)

Complete control.	☐	0
Much control, usually able to stop or divert thoughts about misophonic sounds with some effort and concentration.	☐	1
Moderate control, sometimes able to stop or divert thoughts about misophonic sounds.	☐	2
Little control, rarely successful in stopping or dismissing thoughts about misophonic sounds, can only divert attention with difficulty.	☐	3
No control, experienced as completely involuntary, rarely able to even momentarily alter thinking about misophonic sounds.	☐	4

6. **Have you been avoiding doing anything, going any place or being with anyone because of your misophonia?** (How much do you avoid, for example, by using other loud sounds, such as music?)

No deliberate avoidance.	☐	0
Mild, minimal avoidance. Less than 1 hr/day, or occasional avoidance.	☐	1
Moderate, some avoidance. 1 to 3 hrs/day and frequent avoidance.	☐	2
Severe, much avoidance. Greater than 3 and up to 8 hrs/day. Very frequent avoidance.	☐	3
Extreme, very extensive avoidance. Greater than 8 hrs/day. Patient does almost everything he/she can to avoid triggering symptoms.	☐	4

Finally:

What would be the worst thing that could happen (to you) if you were not able to avoid the misophonic sounds?
Describe

Total score A-MISO-S:

[a]Reprinted from Schröder et al.[6]

auditory stimuli, predisposing them to sound intolerance. The common occurrence of psychiatric disorders in individuals with misophonia, although not conclusive evidence for its nosologic classification per se, may indicate shared underlying pathophysiology among misophonia and these disorders. Although the interactions between bipolar disorder and misophonia remain unclear, we suggest that there may be some value in screening for misophonic symptoms during episodes of bipolar depression with mixed features.

Published online: April 30, 2020.

Potential conflicts of interest: **Dr Sharma** has received grant support from, participated on scientific advisory boards for, or served on speakers' bureaus of Assurex, Genome Canada, Neurocrine Biosciences, Otsuka, Sage Therapeutics, Stanley Medical Research Institute, and Sunovion and reports personal fees from Neuroscience Education Institute. **Ms Sharan** reports no conflicts of interest related to the subject of this report.

Funding/support: None.

Patient consent: The patient reviewed the report and provided written consent for publication, and information has been de-identified to protect anonymity.

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