Case Report

Misophonia: a case report

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ABSTRACT

Misophonia or Selective Sound Sensitivity Syndrome or Sound Rage, is a relatively less known condition characterized by strong emotional and physical response like headache, and emotional response on anticipation or exposure to sounds, which significantly impairs the quality of life. It is a rare condition and not seen routinely in clinical practice. We present here a case of misophonia that did not respond so well to medication and responded to systematic desensitization.

Key words: misophonia, sound, sound rage, systematic desensitization.

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INTRODUCTION

Misophonia or Selective Sound Sensitivity Syndrome or Sound Rage, is a relatively less known condition characterized by strong emotional and physical response like headache, and emotional response on anticipation or exposure to sounds, which significantly impairs the quality of life [1]. Even sounds of intensity as low as eating, raining, breathing can produce strong emotional response like anger, irritation, disgust, or anxiety. These emotions are found to be unwanted, uncontrolled, and excessive. The reaction may be influenced by one's history, subjective assessment of the sound, beliefs about possible danger, psychological profile, and the context in which sound appears [2]. There is debate on what kind of sounds can produce misophonia. Some researchers consider that any sound can be misophonic, whereas others consider only those that are produced by people. Considering the mechanism, some authors link misophonia to genetic disorders and some claim it to be related to dysfunction of central auditory pathways. Some consider it to be formed as a process of classical conditioning [3]. Kumar and others consider it to be abnormal activation of anterior insula whereas some studies report measurable skin responses and abnormal autonomic activation in response to sounds [4]. Because of limited data and lack of diagnostic criteria, only a few scales and questionnaires are available for assessing it, most of which are unvalidated. Misophonia is not related to hearing impairment. Some studies suggest that it can be present as comorbidity with obsessive compulsive disorder, mood disorder, ADHD, Tourette's Syndrome and Hypochondria, but there is lack of literature on the same. The exact prevalence of the disease is not known. It ranges from 3-15%, depending upon the study. It was first described in 2002 when patients with sound intolerance were not fitting into the criteria of any known disorders [5]. Since then, many reports have come up on the disease, but it is still not identified as a separate disorder in any diagnostic criteria and there is dearth of literature on the management of the same. Here we describe a case of misophonia and its management.

CASE REPORT

A 27-year-old male patient who was unmarried and Mechanical Engineer by occupation, residing in Chunabhatti, Mumbai, visited our outpatient services with complaints of bitemporal throbbing headache and earache for 2 years. The headache was severe In intensity, precipitated by a variety of everyday sounds like sound of rainfall, mixer grinder, pressure cooker, trains, grinding of metals and stones, drilling machine, temple bells, clapping, hammering etc. No associated nausea or vomiting or avoidance to light stimulus was present. It had started interfering with his social life. It would become difficult for him to stay at home due to exposure to sounds of household appliances, because of which he would need to go out. Outside, he would have difficulty on exposure to temple bells in his vicinity. Thus gradually, he started restricting himself to home and would interact less with people. Furthermore, he stopped going to his work also due to frequent headache ad earache and currently he is not working since approximately 1.5years. He started feeling isolated and helpless. He consulted various physicians and neurologists and was extensively evaluated including MRI Orbit with Optic Nerve and EEG. All investigations were found to be normal. Otorhinolaryngologist ruled out tinnitus and any organic cause for the condition. The patient was thus referred for Psychiatry opinion. He visited several psychiatrists and was given a trial of medications like Divalproate, Naproxen, combination of Amitryptiline and Propranolol, Tiapride etc. But the patient showed very minimal improvement on the medications, that too ill sustained. The patient was finally referred to our outpatient services. After a detailed history and examination, patient was thought to have Misophonia. The patient was applied Misophonia Assessment Questionnaire (MAQ), Misophonia Emotional Responses and Misophonia Coping Responses. He was given a trial of Duloxetine and Clonazepam, but with no response. Finally, the patient was taken for Systematic Desensitization. Before starting the therapy, the patient was taught various relaxation exercises including Jacobson Progressive Muscle Relaxation (JPMR) and asked to practice it 2-3 times daily till he gets well versed with the technique. Then a list of all the sounds which trigger headache and earache was made in hierarchy, starting with sound producing least discomfort to the one producing maximum discomfort. Following this the patient was exposed to each individual sound, firstly in vitro (on mobile phone, gradually increasing the intensity of sound) and then in vivo, gradually decreasing the distance from the sound. The patient was told to relax simultaneously when exposed to a particular sound till it stops producing discomfort. Thus, he was exposed progressively to higher intensity sounds after he masters the sound at lower level. The session was taken once weekly for approximately 45minutes. He was again applied the same questionnaires after 6 sessions to see for the response and he was glad that he had shown approximately 50% response to the therapy. After around 12 sessions in 3 months, the patient showed around 80% improvement in symptoms, and he reported that he has never been this better before in the past 2 year. He started carrying out his daily routine activities and could resume his work without any discomfort again.

DISCUSSION

As we can see from the case above, external sounds like that of rainfall, mixer grinder, pressure cooker, trains, temple bells, clapping, etc produced physical complaints like headache and earache leading to emotional features like anxiety. This is in contrary to reports which suggest that misophonic sounds include mostly those produced by humans. Initial diagnosis was made clinically by ruling out the various organic causes and severity using Misophonia Assessment Questionnaire (MAQ) [6]. It was developed by Dr. Marsha Johnson and has 21 questions with response to each on Likert scale of 0-3. the maximum score is 63. Patients with score 0-11 are subclinical cases, which do not need treatment, 12-24 are mild, 25-37 are moderate, 38-50 is severe and 51-63 is extreme Misophonia. The initial score of the patient was 29, indicating moderate Misophonia. After 6 CBT sessions, MAS score lowered to 13 and 10 at the end of therapy, thus showing response on the treatment. Misophonia Emotional Responses Scale (26-item questionnaire) and Misophonia Coping Response Survey (21-item scale) were used to assess the frequency of emotional responses and coping to Misophonia triggers respectively. Both the scales have good reliability (α= 0.94 and 0.89 respectively), but these have been used less frequently in the previous studies [7].

There is lack of evidence on treatment strategies to manage misophonia, probably because of dearth of literature on aetiology of the disease. Analysis of the coping strategies adopted by the patients revealed that avoidance of distressing situations and other dysfunctional behaviours can be replaced by more positive approaches. Misophonic trigger gets negatively reinforced by the behavioural response, which leads to negative emotional reaction. Thus, habituation and cognitive restructuring have been found to be effective in these patients. In our case, we tried Systematic Desensitisation for the patient, based on the principle of counterconditioning of the misophonic stimuli with relaxation therapies [8]. Tinnitus retraining therapy i.e. external sound systems or sound masking systems using headphones has also been found to be effective. Some case reports also show the benefit of using β blockers to lower the sympathetic activity and hence the emotional response [9]. Misophonia though rare is a condition that may be seen in clinical practice.

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