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A case of atypical auditory charles bonnet syndrome

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Abstract

Auditory Charles Bonnet syndrome is a condition that presents with sensorineural hearing loss and associated auditory hallucinations which presents with complex hallucinatory sounds in the form of music, voices etc. In majority of the cases subjects improve with successful hearing aids and some require medications based on co existing psychopathology. This is a case of old age male, an ex-army man coming from a middleclass rural background in a developing country with no history of any chronic medical and psychiatric illness presented with complains of hearing voices and music which was gradual in onset with parallel history of bilateral sensorineural hearing loss. Subject was cognitively intact and mental status examination revealed predominant anxious preoccupations, transient auditory hallucinations, occasional elementary musical hallucinations, and delusions. Subject had partial

insight into his symptoms. Subject was treated with olanzapine 10 mg/day to which he responded which was increased to 15 mg/day to which subject had almost reached nil psychopathology and anxiety symptoms were treated with clonazepam 1 mg/day to which he responded completely.

Keywords: Charles bonnet syndrome, hallucinations, auditory, musical

Introduction

Auditory Charles Bonnet syndrome or Oliver Sacks syndrome is portrayed by fantasized tunes, songs, music, rhythms, or potentially tones. They can be felt inside the head, or like exuding from the surroundings. Individuals will in general ascribe them to an outside source in most cases, within a couple of days, most understand that the music starts from "the inside" their head. Knowledge is frequently under researched and, aside from hearing voices or tinnitus, most patients

show no extra comorbidity. Robert Schumann has included musical hallucinations into his Violin Concerto in D Minor and Bedřich Smetana showcased his musical hallucinations were in the form of two male voices in G major. Smetana who later developed bilateral severe hearing loss secondary to syphilis and experienced further musical hallucinations. (1, 2, 3). The most common cause of this psychopathology is hearing impairment. Hallucinations ten to worsen in noise free environment. Risk factors are advancing age, isolation from society, female gender. There are other neurological, psychiatric conditions, medications, head injury, epilepsy, dementia, brain lesions which has been ascribed to this condition. Imaging studies showed basal ganglia, brainstem, pons, tegmentum, cerebellum, hippocampi, amygdala, visual regions, right temporoparietal region and orbitofrontal regions. (3, 4, 5)

Case Report

A male, aged 78 years with intermediate education who was an army professional retired from service coming from a middle-class family of a village in northern India with no previous psychiatric history or any chronic medical illness was evaluated at our outpatient department with a complains of hearing voices and music. The patient was noted to have received bilateral hearing aids two years ago due to bilateral sensor neural hearing loss and later discontinued after a year. Subject had a history of hearing voices calling him and voices discussing which started for two to two and half year's duration. He had a history of gradually loss of hearing for some years which had reached a stage of complete hearing loss bilaterally for almost 2 years. He also gave history of occasional elementary hallucinatory sounds and music many times during the previous two years. He also gave history of anxiety and panic attacks.

Patient had partial insight into his symptoms. He presented to our hospital with acute exacerbation of hallucinations and associated sleep impairment.

Routine blood and urine laboratory workup was unremarkable. Computed tomography of the brain revealed mild age-related atrophic changes mainly in frontotemporal region. Cognitive examination showed subject well performing despite the hearing disability. Brief psychiatric rating scale showed mainly hallucinatory behaviour, anxiety, and suspiciousness of moderately severe level. Oto rhino laryngology consultation was done to get the hearing tested and to provide hearing aids. Subject was treated with olanzapine 10 mg/day to which he responded partially so the dose was increased to 15 mg/day after a week to which subject had almost reached nil psychotic symptoms and anxiety symptoms are treated with clonazepam 1 mg/day to which he responded completely.

Discussion

Charles Bonnet syndrome with impaired vision have visual hallucinations, like wise patients with hearing impairment have musical hallucinations and other auditory hallucinations. There are several aetiologies which have been listed in the literature but remain unclear. There is evidence that these hallucinations are part of release phenomenon due to prolonged sensory deprivation. (3, 6, 7) It is also defined as phenomenon of differentiation due to ear pathology. A hyperactive ear condition and absence of specific stimuli in regions of brain is another theory implicated. Auditory musical hallucinations without psychiatric disease have been described half a decade ago in the literature. Subjects had reported hearing loud and instrumental music with or without songs. This music was well known to the subjects since childhood. Berrios said that 70% of cases

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auditory hallucinosis is associated with hearing loss and it had association with otosclerosis. (8, 9, 10) The syndrome with lesions of the temporal lobes and temporal lobe epilepsy has also been reported. Treatment usually is aimed treatment of the underlying cause. Use of hearing aids and cochlear implants has been tried but neuroleptics usually shows some improvement. (11) Cholinesterase inhibitors like donepezil and rivastigmine had showed improvement in similar cases in the past. (7, 8, 11) Treatment using antiepileptic may fail if the auditory are not due to seizures. Cases of musical hallucination as a part of aging process is also gaining research interest. Atrophic changes in the brain particularly dementia with temporoparietal and fronto-subcortical regions have been implicated in the development of musical hallucinations. (11,12)

Conclusion

In this case of Auditory Charles bonnet syndrome which is probably associated with hearing loss caused by unknown pathology. It is an atypical presentation in this case with male subject with bilateral sensory neural hearing loss and associated transient psychotic symptoms. Most common phenomena are musical hallucinations, but it is less severe and infrequent in this case. In most of the cases reported are associated with other types of hallucination. It can be modified by attention and will. Not accompanied by disturbances of consciousness, memory, or judgment. Treatment of hearing impairment leads to complete healing in most of the cases. Results were satisfactory with psychotropic drugs. Subject was advised to get treatment for hearing loss with the help of hearing aids. Psychoeducation was also an important mode of treatment in such cases.

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