Case Report

Lilliputian Hallucinations: A Case of Alcohol Withdrawal Syndrome

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ABSTRACT

Lilliputian hallucinations are rare types of visual hallucinations in which an individual perceives an imaginary object, person, or animal of diminutive size. In this case report, we describe a patient with alcohol withdrawal syndrome who presented predominantly with vivid Lilliputian hallucinations. This case requires a thorough assessment by a psychiatrist to avoid misdiagnosis, and the treatment approach is different from usual.
Keywords: Alcohol use disorder, alcohol withdrawal syndrome, Lilliputian hallucinations

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INTRODUCTION

Lilliputian hallucinations are an infrequent and complex type of visual hallucination where imaginary objects, people, or animals are greatly reduced in size. Small figures of animals or people appear as visions, often in the bottom half of the visual field, sometimes as dancing, playful creatures [1]. It is usually described that these small images are brightly coloured creatures that move around. The term 'Lilliputian' was coined by French psychiatrist Raoul Leroy in 1909, who wrote from personal experience [2]. A variety of clinical conditions have been associated with Lilliputian hallucinations. These conditions include sleep disturbances, delirium, dementia, basilar migraine, schizophrenia, and alcohol withdrawal states. Also, medical conditions such as toxoplasmosis, mesencephalic lesions, cerebral tumours, epilepsy, Charles Bonnet syndrome, and trichloroethylene poisoning cause Lilliputian hallucinations [3–6].

Lilliputian hallucinations are traditionally considered benign and pleasurable. Furthermore, unlike unilateral auditory hallucinations, they do not signal focal brain damage [7]. Alcohol is an organic compound that can have many negative health effects, not only physically but also psychologically, socially, and spiritually. Nearly half of patients with alcohol use disorder present with alcohol withdrawal syndrome [8]. Alcohol withdrawal syndrome is diagnosed when there are two or more withdrawal features such as hand tremors, insomnia, autonomic hyperactivity, psychomotor agitation, nausea or vomiting, transient hallucinations, anxiety, and generalized tonic-clonic seizures causing functional impairment or significant distress, following several hours to a few days after cessation or reduction in alcohol use that has been heavy and prolonged, when there is no apparent alternative cause [9]. Although alcohol consumption is prohibited in Islamic countries like Saudi Arabia due to Islamic norms, many people are still abusing it nowadays [10].

CASE REPORT

A thirty-year-old, middle-class, educated, married male was brought to our emergency department with excessive alcohol consumption and abnormal behaviour. He had been abusing alcohol for more than three years, and his intake of alcohol had increased over the last year. He used to take an average of 20 to 30 ml of alcohol daily in the form of arrack. This alcoholic beverage contains 30 to 40 percent alcohol. Whenever he had financial difficulties, he also abused artificially made illicit alcohol to counteract cravings and withdrawal symptoms.

Over the last two weeks, the patient reduced half of his regular intake and completely stopped about a week ago. His relative then noticed a change in his behaviour. There were withdrawal symptoms such as restlessness, tremors, autonomic hyperactivity, and psychomotor agitation. Following this, his sleep was markedly decreased, and he started to see dwarf people all over the house. He explains they are about a foot tall with strange, brightly coloured dresses, big eyes and mouth with weird faces. In addition, he said many of them wore different spectacles. He is suspicious and said they would follow and harm him, and he became fearful. Also, he is hearing the voices of their footsteps. During the interview, the patient had visual hallucinations of the Lilliputian type. The patient stood and looked at the interviewer with surprise and pleasure. He said I needed to stand to see you properly because of your dwarfish appearance and colourful attire.

A mental status examination revealed that the patient was experiencing visual hallucinations of Lilliputian nature and secondary delusions of persecution. He didn't reveal any psychopathology. A physical examination revealed tremors in the extremities. He has no history of suggesting medical illnesses or surgical interventions. His history of alcohol abuse dates back two years, and he has abstained from alcohol for the past week. Routine laboratory tests such as the complete blood cell count, serum electrolytes, and kidney function test were within normal limits, but liver enzymes were elevated. Computed axial tomography was normal. Based on the result of the above examination and laboratory tests, we diagnosed him with alcohol withdrawal syndrome.

At first, his hydration, nutrition, and sedation were maintained. He was detoxified with benzodiazepines, such as diazepam. At the beginning, diazepam 10 mg was taken orally three to four times a day. This was followed by a maintenance dose of diazepam 5 mg orally three to four times a day. It was tapered off after four days I also started thiamine injections at over 100 mg initially, then switched to thiamine orally at 100 mg twice daily for one week. Discharged patient after 24 hours from our emergency department. He was referred to occupational therapy, including group activities. On follow-up after one week, his hallucinations and other withdrawal symptoms subsided completely.

DISCUSSION

Alcohol Withdrawal Syndrome experienced visual hallucinations of Lilliputian nature along with other psychopathologies such as illusion. The forms of rats, snakes, and other small animals can appear vividly and colourfully in Lilliputian nature [11]. In our case, the patient had similar hallucinations of little, funny people following him and harming him. Lilliputian sight, micropsia, or the 'Alice in Wonderland Syndrome' where objects are perceived as smaller than in reality. This is a condition of altered perception where the eye mechanics are not affected, only the brain's interpretation of information passed from the eyes [12]. The phenomenon of hallucinations is a behavioural manifestation of brain function, as is the process of interpreting reality. There is evidence that Lilliputian hallucinations are caused by underlying neurobiological disturbances, but their specific details remain poorly understood. However, the most bothersome symptom in our patient was visual hallucinations, which made him anxious and contributed to sleep disturbance. Visual hallucination is the perception of an external visual stimulus in the absence of any external stimulus. The disorder can be caused by disturbances in the brain's anatomy, chemistry, prior experiences, and psychodynamics. Generally, it can be divided into simple and complex types. Simple hallucinations may include colours, lights, lines, shapes, or geometric designs and are also called "elementary" or "non-formed". Complex hallucinations include images of people, animals, objects, or scenery and are also called "formed" hallucinations. Specifically, our patient had Lilliputian hallucinations, in which things, animals, or people seemed smaller than their actual size. The most common disorder associated with Lilliputian hallucinations is alcohol withdrawal syndrome. A well-established treatment for alcohol withdrawal syndrome is benzodiazepines, which prevent agitation, seizures, and delirium tremens while being cross-tolerant to alcohol.

The presentation of alcohol use disorder in this case is multi-faceted and is influenced by the patient's psycho-social context. It therefore requires a comprehensive evaluation from several disciplines, including a psychiatrist, physician, occupational therapist, and social worker. To begin the presentation, a professional psychiatric team should perform a thorough evaluation. Despite the presence of prominent visual hallucinations, the patient is not considered to be suffering from a psychotic disorder. It also requires a patient-centered, long-term rehabilitation program, along with timely, adjusted pharmacological treatment. In order to understand and establish the pathophysiology of this strange phenomenon, more studies in functional neuroimaging are needed. It is imperative that further research be conducted to understand the pathophysiology of Lilliputian hallucinations in both organic and functional disorders.

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