Introduction

A hallucination is a perception in the absence of an external stimulus. It may occur in any sensory modality. Auditory and visual hallucinations are not uncommon in psychiatric practice.

Visual hallucinations have numerous aetiologies (1). They can be the result of different processes such as disturbances of brain anatomy, brain chemistry, prior experiences, and psychodynamic factors may also influence the picture (1). Irritation of cortical centres, lesions of the visual system, problems related to the reticular activation system, cognitive deficits and psychiatric disorders maybe associated with the occurrence of visual hallucinations (2). It could also occur as a result of involvement of the cerebral visual association area, leading to phantom visions. Prolonged blindfolding, social isolation and failing vision could also lead to such visual perceptions (3). One hypothesis is that sensory deprivation enhances ongoing activity of the visual system after sensory loss (4). These visual hallucinations are usually distressing, but occasionally could be experienced as being pleasant.

Charles Bonnet syndrome (CBS) is a condition where patients with visual impairment experience complex visual hallucinations (4). This syndrome commonly occurs in the elderly. It often goes unrecognized due to unawareness, poor insight and issues related to stigma (4).

Case Report 1

A 66-year old farmer, who was on treatment for diabetes mellitus, reported that he had been experiencing seeing ‘images’ of devils for 4 months duration. The images were of short, dark, hairy figures, with long sharp teeth, large stomachs and bulging (‘googly’) eyes, a large red tongue and curly hair. He described them as ‘devils’. Initially, these images were not well formed, but were distressing. Later they gradually became vivid and well formed. By the time of presentation, the patient was still seeing these images, but was no longer disturbed by them. He described seeing male and female adult ‘devils’, who often appeared as a group. He did not hear their voices, though he saw them dancing and talking to each other. He experienced this day and night, multiple times every day, when he was fully awake and conscious. He did not experience any other perceptual distortions or hallucinations, nor did he have any inappropriate thoughts. His neurovegetative functions were normal. He had no recent history of alcohol or substance use except for betel chewing. He was diagnosed to have type II diabetes mellitus, but he had not adhered well to the management plan. There was no past psychiatry history. His wife revealed that he had worked part time as a helper to a local healer (Kattadiya).

Mental state examination revealed a euthymic mood, visual hallucinations and normal cognitive functions. His mini mental state examination score was 28/30. Contrast CT brain, and blood investigations were normal.
History also revealed that the patient had started to lose his vision gradually over a period of 4 months. He had started to experience visual hallucinations simultaneously. Ophthalmological referral reported cataract in both eyes, but the patient did not consent for a surgical intervention. Risperidone 2 mg nocte was started on the day of initial presentation. At one-month review there was significant improvement of his symptoms. The visual hallucinations had faded considerably and were no longer vivid. On continued treatment, after three months the hallucinations had disappeared completely.

Case Report 2

A 75-year old retired teacher presented to the private sector complaining of fear and anxiety for 6 months duration. This presentation was reported against a background of visual impairment for one year. He had been on treatment for glaucoma and failed to continue medication. In addition, a general practitioner had prescribed amitriptyline for intermittent sleep disturbances. This had made his condition worse.

He was anxious about seeing vivid images of ‘devils’ during daytime, which worsened in dim light. He described the images as naked, black, short figures, with sharp teeth and fingernails, protruding tongues and large scary eyes. He described seeing male ‘devils’ only. These visual hallucinations worsened with his worsening blindness. This was associated with an increase of his anxiety symptoms, and he also experienced frequent panic attacks. His sleep cycle was severely affected by the increasing levels of anxiety.

This patient lived with his 68-year old wife, and had limited social and family support. He had no history of substance or alcohol use. He had discontinued lipid lowering drugs prescribed for dyslipidaemia five years previously. He had witnessed devil dancing performed by local healers as a child; this had been a common practice in his village during his childhood and adolescence.

His mental state examination revealed an anxious mood, visual hallucinations as described above and normal cognitive functions. There were no other hallucinations or delusions elicited. His insight was limited.

He had hyperlipidaemia on investigation, and CT brain showed age related atrophy only. He was referred to the ophthalmologist, but his blindness was irreversible. Risperidone was effective in treatment. His hallucinations gradually settled with time. He was asked to continue treatment with a maintenance dose of risperidone 6 mg nocte.

Case Report 3

This 60-year old local healer was a popular man in his village. He used to heal people by means of devil dancing. People in his village believed that certain illnesses could be caused due to people being possessed by ‘devils’.

This patient had unexpectedly become blind in both eyes following an accidental injury 2 years previously – he had sustained facial burn injuries due to a leak in a domestic liquid petroleum gas cooker, which had also caused blindness. Initially after the incident he had been treated for posttraumatic stress disorder (PTSD). His condition had improved with psychiatric treatment. However, he reported starting to see ‘devils’, that he found very distressing. He reported seeing different types of male and female ‘devils’ throughout the day, of many different sizes and shapes. Most appeared in groups of four to five figures, and he described that some were playing drums. Initially he had been scared by these images. With frequent experience of images this fear and anxiety subsided, and ultimately he described enjoying these ‘visions’.

This patient had been dependant on alcohol and cigarettes until the age of 50 years. He had stopped both substances after development of a non ST elevation myocardial infarction 10 years previously. At the time of presentation he was on treatment for ischaemic heart disease and hypertension.

His mental state examination revealed a euthymic mood, visual hallucinations and normal cognitive functions. His insight was poor.

Aripiprazole was started to manage his hallucinations. The dose was increased to 45 mg over a 4-month period. The hallucinations improved, but without a complete remission.

Discussion

The belief that certain ailments, especially psychiatric illnesses, are caused by unseen forces, is a cultural belief in Sri Lanka. Devil dancing is a local healing ritual performed in some parts of the country in response to this belief, referred to as a ‘thovil ceremony’ (5). These healing rituals used to be popular especially in the southern coast of Sri Lanka, although they are currently decreasing in frequency (5). The healers or exorcists at these ceremonies wear masks, often representing different kind of devils. Traditionally, there are different ‘devil or sanni masks’, each specializing in curing specific illnesses (5). Varying ailments are treated with different rituals specific to the condition, and the sick person, family members and villagers usually participate in these events (5).
The content of psychopathology such as hallucinations occurring in psychiatric illness, can be influenced by many factors, including the individual’s social and cultural background (6). Thus content of the perceptual disturbances may differ from one culture to the other (6). This case series highlights how the content or nature of the visual hallucinations experienced by three patients with CBS was influenced by their social and cultural backgrounds.

All three patients were diagnosed to be suffering from CBS. While data is limited, evidence suggests that antipsychotics and SSRIs are possible treatment options for visual hallucinations in CBS (7-9). The three patients in this case series responded well to second-generation antipsychotics. Treatment of the visual disorder in patients with typical CBS may improve the hallucinations and its impact on life (10). However, for patients in this case series, there was difficulty in treating the visual defects, for varying reasons.

**Declaration of interest**

None declared

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**References**