

Charles Bonnet syndrome

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Summary:

A 41 year old married labourer presented with complex visual hallucinations for six months. He had reduced visual acuity, a subluxated lens, and two retained sutures from a previous surgery of the right eye and complete blindness of the left eye. His mental, physical and neurological examinations were unremarkable. Surgical correction of his visual impairment resulted in resolution of symptoms.

Introduction

Charles Bonnet syndrome refers to the occurrence of visual hallucinations in persons with visual impairment without any other features of psychosis, dementia or delirium (Murali and Peter, 2006, Gelder et al., 2005). It is named after a Swiss philosopher and naturalist, Charles Bonnet, who described the case of his own grandfather, Charles Lullin, in 1760. Later on, Bonnet himself developed the condition (Murali and Peter, 2006).

The visual hallucinations are often complex, well-formed and elaborate. They are more vivid than the patient's impaired vision would otherwise permit, and perceived always in external space. Images of people, animals, buildings and scenery are most frequently reported (Oyebode, 2008). The content is elementary in about one-third of cases, and appear as photisms or geometric patterns (Oyebode, 2008). They have no personnel meaning for the patient (Oyebode, 2008). Although they meet most of the criteria for true hallucinations, the patient usually retains some insight (Gelder et al., 2005) in to their unreality, and can often make the image disappear by closing their eyes (Oyebode, 2008).

The condition tends to improve if vision is restored, or when total blindness occurs. There is no specific treatment (Gelder et al., 2005).

Case report

A 41-year-old married male labourer of low-socioeconomic status presented to the psychiatry clinic with a six month history of increasingly complex visual experiences that he recognized as true initially but later as unreal. These had started as unfamiliar faces that appeared episodically for up to 15-30 minute periods. After about a month, he began to see in public spaces both familiar and unfamiliar persons as well as animals. A week before coming to the hospital, he had started to see frightening scenes of people coming to attack him, quarrels, burning houses, and terrifying animals. These experiences became more frequent and occurred many times a day. He described the experiences as detailed, vivid and occurring in external space. He was unable to consciously control their occurrence or content, and described the experiences mostly as distressing. They were never accompanied by clouding of consciousness or abnormal perception in any other modality. He did not have a history of fever, trauma, or substance misuse.

He gave a history of a subluxated lens in his right eye that was removed two years before, and complete loss of vision in his left eye. There was no past history of schizophrenia, mood disorder, epilepsy, drug dependence or physical illness such as diabetes, hypertension or transient ischaemic

attacks. There was a vague history suggestive of a psychotic illness in his mother and younger brother, although no documentation could be traced.

He was the eldest of two siblings. His birth, early infancy and development were uneventful. He was educated up to grade 10 with satisfactory literacy and numeracy. He was an unskilled labourer and his 38 year old wife was unemployed. He had three children. He was a non-smoker and a teetotaler.

His physical and neurological examination was unremarkable other than the reduced visual acuity (4/60) in the right eye with a subluxated lens and two retained sutures in the cornea from a previous surgery, and complete loss of vision in the left eye.

The routine blood and urine examination, electrocardiogram (ECG), electroencephalogram (EEG) and computerized tomography (CT) scan findings were normal.

With surgical correction and refractory adaptation his vision improved in the right eye leading to fading away of his visual hallucinations.

Discussion

A knowledge of the syndrome is important to avoid a misdiagnosis of psychosis which results in unnecessary treatment with neuroleptics (Oyebode, 2008). Although the syndrome is particularly common in the elderly, it can occur at any age. The exact aetiology of Charles Bonnet syndrome is not known. It has been described in association with lesions of the visual system ranging from the lens of the eye to the occipital cortex, as well as lesions in areas not associated with the visual system (Gold and Rabins, 1989). In particular, central macular degeneration with peripheral vision impairment due to glaucoma may predispose to the condition (Murali and Peter, 2006, Oyebode, 2008). Episodes may last from

days to years (Oyebode, 2008). It is usually self-limiting, even in those cases where the organic lesion is permanent (Kolmel, 1985).

Visual hallucinations unrelated to Charles Bonnet syndrome and without evidence of other psychopathology have also been described in visions experienced during cultural rituals, childhood imaginary companions, hostage hallucinations associated with life-threatening situations (Siegel, 1984), visions during sleep-wake transitions (hypnogogic and hypnopompic), bereavement hallucinations of widowhood (Alroe and McIntyre, 1983), and parkinsonism (Bhatia et al., 1992) and levodopa - induced hallucinations (Moskovitz et al., 1978).

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