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CHARLES BONNET SYNDROME: TWO CASE REPORTS

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Two patients diagnosed to have Charles Bonnet syndrome are presented. In one of these, the symptoms were self limiting while in the other, the patient refused carbamazepine therapy despite persistence of symptoms. Both were followed up regularly over the four years, and mental status examination and investigations done during this period were within normal limits. Both are currently fully functional in their respective professions.

Key words: Charles Bonnet syndrome, Bonnet syndrome, carbamazepine, pseudohallucination.

INTRODUCTION

A hallucination is an abnormal subjective sensory experience having the quality of representing external reality like a percept, in the absence of a concomitant and congruent sensory registration. It is sometimes experienced as originating within one's body. The Charles Bonnet syndrome is a rare clinical phenomena characterized by vivid complex mono modal visual hallucinations, where the patient has insight into its unreality, and where no psychiatric disorder can be elicited (Gold & Rabins, 1989). The term was first coined by de Morsier in 1938 (Damas Mora et al, 1982).

CASE SUMMARIES

Case 1: Mr. S., a 41 year old university English lecturer gave the following description of his three similar episodes of subjective experience over the preceding one year. The last two were two days before the consultation (reproduced here in his own words): "In the morning at about 10 o'clock, while I was talking to my wife, I saw four people who were cloth vendors, each having a big bag of packed clothes walking about in front of me. Their faces were unfamiliar; when I wanted to scan the figures closely they vanished. I told this to my wife, who denied having seen such people in front of her simultaneously or at any other time. On the same evening, I saw water flowing from a mountain and getting scattered on hitting the big stones below. While the water got scattered, I saw many fish. Some boys tried to catch them. When I tried to have a closer look, the entire scene vanished. I again asked my wife whether she had such experiences simultaneously and she answered in the negative".

On both these occasions this gentleman was sitting in an easy-chair in front of his house. He said he could not bring back the same visual experiences voluntarily. He was a teetotaller staying with his family and did not have any emotional or domestic stress. Except for minimal frustration on not getting his promotion on time, which he tolerated, he did not have any occupational stress either. During each of these episodes, he did not have any altered consciousness, temporal lobe phenomena, transient or long term neurological or speech deficits. His reaction to the above experience was of surprise and amusement and he reported that he felt that they were not real.

He did not have any similar experiences in any other sensory modalities. He did not have any recent, past or family history of sleep disturbance, mental illness, epilepsy, temporal lobe phenomena, or periods of altered sensorium. His optic fundi were normal. He had 6/6 vision; perimetry was normal and he did not have any ophthalmic disease. His serum electrolytes, blood urea, blood sugar, blood counts and liver function tests were within normal limits. His Venereal Disease Research Laboratory Test and ELISA (for HIV) were reported to be negative. Electroencephalogram and Computerized Tomography scan of the brain, plain and with enhancement were normal. Psycho diagnostic evaluation (for organicity, lobe function tests, Rorschach, Thematic Apperception test, IQ on WAIS) revealed no abnormality. During the further four years of follow-up he did not report any such experience or history suggestive of any mental illness or any type of epilepsy.

Case 2: A fifty three year old Medical Officer who lived happily with his family and worked regularly in the hospital gave the following episodic subjective experience over the preceding five and a half years (reproduced here in his own words): "I see arrays of hillocks and valleys with lakes in which swans are floating, deer running in the grassy land and water flowing. Sometimes I see multicolored groups of horticultural collections, flowers and fruits. They are not under my control. They appear

in front of my eyes and disappear on their own lasting sometimes between 2-3 minutes or more. It happens more frequently when I am alone. When I am working in the hospital I do not get those experiences at all". On questioning he admitted that his reactions to them was one of amusement. On each of these episodes he had full insight into the unreality of these experiences. During all these episodes he was conscious and alert and had no features suggestive of temporal lobe phenomena or disorders of mood, thought or speech. He did not have any neurological or speech deficits during or flooding these episodes. He did not have a recent, past or family history of mental illness, epilepsy, alcoholism or drug abuse. Serial mental status examinations over the past four years of follow up revealed no abnormality.

For this person also all the investigations as in Case 1 were normal. Except for the fact that he had 6/4 vision in both eyes which was corrected with glasses, he did not have any ophthalmic disease. His optic fundi and perimetry were normal. Laboratory and radiological investigations, electroencephalogram and neuropsychological tests repeated twice during two of the subsequent biannual follow ups were normal. He refused carbamazepine therapy fearing side effects, although he came for regular follow-up. He is currently functioning well at home and at work, despite continuing to have similar episodes with the same intensity and frequency.

DISCUSSION

Victor and Adams (1993) described the syndrome of Bonnet as a type of ophthalmopathic hallucination occurring in a blind or partially blind person. The visual images can be elementary or complex and can occur in the entire visual field in a totally blind person; patients with homonymous hemianopia can experience it in one eye or in the corresponding blind fields. Charles Bonnet syndrome is a complex visual experience with insight, and to that extent it is a perceived complex visual pseudohallucination (Gelder, 1989). Perceiving something as in the external world and simultaneously recognizing that there is no external correlate to this experience is specific with Charles Bonnet syndrome. This is not exactly true of L'hermitte's syndrome where the hallucinations are vivid, diversified and exactly similar to external reality. In L'hermitte's syndrome, the scenes are supposed to move about like an animated cartoon (Victor & Adams, 1993).

Asaad and Shapiro (1986) described the following occasions, where hallucinations can occur in non-morbid conditions: (1) religious or ritualistic activities of some cultures, (2) imaginary companions of children with whom they play and who are treated by them as real, knowing fully well that they are unreal, (3) during grief reactions, (4) fatigue, (5) food and water, sleep or sensory deprivation, (6) hypnagogic, and (7) hypnopompic states. Siegel (1984) reported unshared sensory experiences in life threatening situations. Taylor (1981) described these as pseudohallucination. Wishes, conflicts and past memories can influence the content of hallucinations. In both these patients the content and occurrence of the hallucinations were not under their control. The author failed to elicit any connection between the content or occurrence of the hallucinations with any relevant psychodynamics.

The aetiopathology of this syndrome is still uncertain. Patel et al (1987), Adair (1988) and Hosty (1990) reported cases of elderly patients with visual sensory deprivation, who had Charles Bonnet syndrome. Ribeiro et al (1989) reported an elderly patient with both visual sensory deprivation and posterior parasagittal meningioma who had Charles Bonnet syndrome. These authors have tried to correlate the symptoms with pathology at different levels of visual system right form the lens to the occipital cortex and also in areas not associated with vision. Bhatia et al (1992) had described a single case where complete symptom relief was achieved with carbamazepine therapy.

This clinical pharmacological experience fits in with the generally agreed view that complex formed visual hallucinations originate usually from the temporal lobe (Victor & Adams, 1993). Formed visual hallucinations as reported in temporal lobe epilepsy differ from those in the Charles Bonnet syndrome in that there is insight in the latter and the experiences are more elaborate, in the absence of any associated altered consciousness

Unlike some cases of temporal lobe epilepsy which are associated with fear and apprehension, the above two patients found their panoramic and vivid experiences pleasant, in the absence of any hypomanic features. A striking difference in the case report by Bhatia et al (1992) is that despite the frightening pictures of burning houses, flooded cities, famine and wars in the hallucinatory experience, the predominant mood of the patient was pleasant.

Charles Bonnet syndrome is more common in the elderly (Hosty, 1990). Neuronal loss and weight and volume reduction of the brain becomes noticeable only after the age of fifty (Corsellis & Janota, 1985). Corsellis & Janota (1985) stated that most marked changes start in the fifth decade so that in the ninth decade there is approximately 50% neuronal loss. This observation was true for the superior temporal gyrus but the loss was less marked or absent in some other areas.

The two patients presented became symptomatic in their 41st year and 46th years respectively. If the patients were more elderly, a subclinical and subtle biochemical or neurometabolic alteration superadded to the aging process of the brain could have been speculated as a probable aetiopathology. As the second patient continued to be symptomatic episodically, he was advised to undergo magnetic resonance imaging of the brain with the hope of detecting any subtle lesion. Kolmel (1985) had pointed out that Charles Bonnet syndrome is a self limiting disease. The first patient had only three episodes of the syndrome so far.

Both the patients described here were well educated and were able to describe their subjective experiences clearly to the author. The clinical recognition of Charles Bonnet syndrome depends on clear communication between doctor and patient, and also the doctor's awareness of the entity.

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