

# Charles Bonnet syndrome in a Borneo Iban tribesman

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## ABSTRACT

**Charles Bonnet syndrome is a condition usually seen in the visually-impaired elderly, causing complex visual hallucinations in the absence of any delirium, dementia or psychiatric illness. We report an elderly man, with blindness in one eye and a cataract in the other, from the Iban tribe, which is indigenous to the island of Borneo. He presented with a three-week history of vivid hallucinations of burglars intruding on his living quarters in the longhouse where he lived.**

**Keywords: cataract, Charles Bonnet syndrome, visual hallucinations, visual impairment**

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## INTRODUCTION

Charles Bonnet syndrome is a condition that many clinicians are not very familiar with, yet it has a prevalence rate among the visually impaired that is surprisingly high (10%–30%).<sup>(1,2)</sup> The condition was first described by Charles Bonnet, a Swiss philosopher, whose elderly grandfather had highly complex visual hallucinations of people, animals and nature in spite of blindness and no evidence of dementia.<sup>(2)</sup> Most reviews of the syndrome which are found in the literature generally agree on the following criteria for diagnosis:<sup>(3,4)</sup>

- (1) Complex, often highly vivid, repetitive and stereotyped visual hallucinations.
- (2) Full or partial retention of insight into the unreal nature of the hallucinations.
- (3) No evidence of psychosis.
- (4) No evidence of delirium, substance intoxication, metabolic derangement or focal neurological illness.

There is an old adage in psychiatry which states that whenever you see a patient with visual hallucinations, think of an organic disorder. We report a case that demonstrates that the adage still holds true in spirit. In essence, what the old psychiatrists who taught us this wisdom meant by “organic disorder” is a disorder which is not usually treated by psychiatrists, such as a brain tumour. However, nowadays, we acknowledge that psychiatric disorders also have an organic basis.

## CASE REPORT

A man in his late eighties or early nineties of Iban

origin, a people native to the island of Borneo, was referred by primary care services to Brunei’s mental health services with a three-week history of visual hallucinations of burglars in his living quarters in the “longhouse” where he was resident. The reason his age was unknown was because he was born before such records were kept in his remote village. A longhouse is a type of traditional communal accommodation used by the Iban people. Perhaps a dozen families, usually related, live in a longhouse. Each family has its own separate living quarters which opens into the communal area. Our patient lived in his own private unit in the longhouse. Already visually-impaired following an accident which caused him to lose his right eye while working as a sheet metal worker and a cataract in the left, he also lived in a poorly-lit accommodation.

He was a widower with a dozen or so children (not all of whom were still in the longhouse) who kept a distant eye on his well-being, despite an apparent lack of familial warmth and bonding between them. He had well-controlled hypertension for which he was taking atenolol and no psychiatric history. He started having hallucinations of men breaking into his house and attempting to steal his belongings. It was only during the annual Iban festival of Gawai that this problem came to the attention of his family. When people attempted to visit him to greet him during the festival, he mistook them for the burglars whom he had been seeing and attacked them with a stick. Concerned that her father was imagining things, one of his daughters brought him in for medical attention.

The general practitioner immediately referred him to a psychiatrist. Since he lived in a different district of Brunei far away from the location of the mental health services, an inpatient admission for assessment was arranged. When he was examined, he was pleasant and alert, with no abnormalities found in his mental state, including no signs of psychosis or cognitive impairment, and he was not experiencing the hallucinations at that time. His belief that his hallucinations were in fact burglars cannot truly be called a delusion. Although collateral history confirmed that there was no evidence of intruders, his belief seemed perfectly reasonable given the nature of the hallucinations. Were he to have seen strange animals or buildings, it would have been a different matter. Nor, indeed, was he resistant to the idea that the burglars he had seen were actually

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hallucinations which were the result of an illness. A physical examination revealed no abnormality other than blindness in his right eye and a cataract in the left. There were no focal neurological signs either. However, he did mention that he had had a headache on and off in the last few days prior to presentation. Although there was no history of head injury, urgent computed tomography was arranged to exclude a subdural haematoma; this revealed no abnormalities. An electroencephalogram was also normal.

The admitting doctor commenced a small dose of oral risperidone since there is some limited evidence of its effectiveness in Charles Bonnet syndrome.<sup>(5)</sup> He willingly took the medication. The patient remained voluntarily in the ward for a week. At no point during his admission did he experience the hallucinations again nor was there any suggestion of either mental illness or cognitive impairment. However, he was referred to an ophthalmologist because of his cataract. He was discharged to the care of one of his daughters who had moved to a modern type of house in the capital city of Brunei, Bandar Seri Begawan. A few weeks later, his cataract was removed and he continued living with his daughter. At the one- and three-month follow-ups, he had no recurrence of the visual hallucinations since he had left the longhouse.

## DISCUSSION

The cause of this interesting syndrome is thought to be reduced stimulation (deafferentation) of the visual association areas of the cerebral cortex which leads to increased excitability of the visual cortex.<sup>(2,3,6)</sup> However, other factors are also implicated in the aetiology, such as cognitive impairment, sensory deprivation and social isolation.<sup>(2)</sup> In our patient, sensory deprivation due to visual impairment and social isolation were factors. It would seem highly unlikely that the risperidone he was prescribed would have had such an instantaneous effect.

It was perhaps that the two aforementioned aetiological factors were addressed which were the most helpful interventions, i.e. he was in a well-lit ward living alongside 20 or so other patients and plenty of attentive members of staff.

While it must have been reassuring for the patient and his family to learn that he did not have a mental illness, it must also be a learning point for clinicians. Firstly, visual hallucinations are not characteristic of psychiatric illnesses, and in the elderly, the presence of visual hallucinations does not necessarily imply dementia, particularly when there is impaired vision. There are many causes of visual hallucinations, and Charles Bonnet syndrome is not necessarily the most common, but it is an important diagnosis to bear in mind. We began this article with an old adage which has proven to be robust and we end with another adage which reminds clinicians to think of common diseases ahead of rare ones: "If you hear the sounds of hoofs, think of horses, not zebras." But do not forget to think of zebras too.

## REFERENCES

1. Teunisse RJ, Cruysberg JR, Verbeek A, Zitman F. The Charles Bonnet syndrome: a large prospective study in The Netherlands. A study of the prevalence of the Charles Bonnet syndrome and associated factors in 500 patients attending the University Department of Ophthalmology at Nijmegen. *Br J Psychiatry* 1995; 166:254-7.
2. Menon GJ, Rahman I, Menon SJ, Dutton GN. Complex visual hallucinations in the visually impaired: The Charles Bonnet Syndrome. *Surv Ophthalmol* 2003; 48:58-72.
3. Jacob A, Prasad S, Boggild M, Chandratre S. Charles Bonnet syndrome-elderly people and visual hallucinations. *BMJ* 2004; 328:1552-4.
4. Eperjesi F, Akbarali N. Rehabilitation in Charles Bonnet syndrome: a review of treatment options. *Clin Exp Optom* 2004; 87:149-52.
5. Howard R, Meehan O, Powell R, Mellers J. Successful treatment of Charles Bonnet Syndrome type visual hallucinosis with low dose risperidone. *Int J Geriatr Psychiatry* 1994; 9:677-8.
6. Burke W. The neural basis of Charles Bonnet hallucinations: a hypothesis. *J Neurol Neurosurg Psychiatry* 2002; 73:535-41.