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Charles Bonnet Syndrome: A Case Report

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Background

Charles Bonnet syndrome (CBS) involves nonthreatening hallucinations in patients who have no neurological and no psychological abnormalities but with significant visual impairment secondary to ocular disease, such as macular degeneration, cataracts and diabetic retinopathy.¹

When a patient loses vision, their visual system doesn't process new images. Without data coming through the eyes, the brain fills the void and makes up images or recalls stored images for you to see and this is what causes the hallucinations in CBS.²

Although CBS has no official diagnostic criteria below are the generally accepted and can be used as guidelines to make the diagnosis when appropriate.³

At least one complex visual hallucination within the past 4 weeks

A period between the first and last hallucination exceeding 4 weeks

Full or partial retention of insight into the unreal nature of the hallucinations

Absence of hallucinations in other sensory modalities

Absence of delusions

Figure 1: Hallucinatory Images Characteristic of Charles Bonnet



Thompson JT. Charles Bonnet syndrome. *American Society of Retina Specialists*.

Case Presentation

A 97-year-old woman presented for psychiatric consultation with visual hallucinations for the past 2 months. She reported that she is seeing life-like children and adults in her home, she has developed insight but initially was scared so she called the police and once they arrived, she felt reassured. She denies any auditory or sensory hallucinations. Patient has no prior history of hallucinations or mental illness. She has very good memory. She states that she has been experiencing recent stress and lack of sleep. She reports no further visual hallucinations.

Past Medical History: Scalp melanoma, Colon cancer, Macular degeneration (legally blind), Afib, Anemia

Social History: No current or past tobacco, alcohol, other drug use

Medications: MVI, Folate, Vit C and E, Iron, Metoprolol, Amlodipine, Tramadol PRN

Vitals: Temp: 97.1 F° Pulse: 73 BP: 135/63 Resp: 18 SpO₂: 93% RA

ADLS: 6/6

Physical Exam:

Well appearing, NAD, AAOx3, unable to make eye contact

HEENT: Normocephalic, atraumatic, PERRL, conjunctiva clear, sclera anicteric, moist mucous membranes

Psych: Pleasant cooperative, intact short/long term memory, euthymic affect, no delusions, intact insight.

PHQ-9: 2/27 BIMS (cognitive assessment): 13/15 –cognitively intact

Laboratory studies & Imaging:

Na: 139 K: 3.4 Cl: 102 CO₂: 23 Ca: 9.1 BUN: 14 Cr: 0.58 Glucose: 106

WBC: 7.43 Hgb: 8.7 Hct: 29.5 MCV: 77.6 Plt: 300

Urinalysis: negative for infection

EKG NSR at 73 BPM, left axis deviation, septal infarct age undetermined

Head CT: Age-appropriate atrophy, unchanged sinusitis from prior, no masses, hemorrhage, or extra-axial collections

Patient Outcome:

Patient reports she is relieved that she is not "going senile" after being educated on CBS and that her visual hallucinations may be due to her low vision. Patient received education on heightening visual stimulation to improve hallucinations

Discussion

Prior to this patient's consult, she was labeled as hallucinations likely due to dementia. Including dementia, there are many causes for hallucinations, and it is important to rule them all out prior to a CBS diagnosis. One such study found that only 1 in 16 patients with CBS were properly diagnosed.³ This patient had suffered for 2 months with her hallucinations prior to her arrival and some patients with CBS go years without informing anyone. One study found that over 60% of patients fear that if they admit their hallucinations, they would be labeled insane.⁵ It's important to provide patients with education and counseling which often comes as a relief to the patient and their families. It's also important to improve visual impairments, if possible, but unfortunately for our patient she had seen ophthalmologists with no visual acuity improvement. Some studies have found decreased hallucinations with heightened visual stimulation with brightened environments, increased social interaction, and rapid eye movements. Our patient was not given any medications directly to treat her hallucinations but there has been evidence that antipsychotics and anticholinesterases, have shown improvements.¹

Conclusion

Many physicians are unaware of CBS and its prevalence, and with proper detection, physicians can help treat their patients with a frequently missed cause of hallucinations. In one study it was found that 54% of physicians were unaware of CBS and another found that visual hallucinations with CBS in patients with visual impairments is estimated to be as high as 11-15%.^{6,7} Through increased awareness, physicians can make sure to ask about hallucinations in their visually impaired patients, reduce the stigma associated with hallucinations and properly reassure their patients with CBS.

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