Eyes Playing Tricks: A Possible Case of Charles Bonnet Syndrome

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Objectives

• List core symptoms of Charles Bonnet Syndrome (CBS)  
• Distinguish common findings and patient characteristics in CBS versus other illnesses with hallucinations  
• Recommend nonpharmacologic therapies for CBS  
• Discuss drug therapies used in CBS cases

Case details

CC: “I keep seeing faces outside of my house near my truck and trailer”

• HPI: 78 year-old Caucasian male admitted to the geriatric, inpatient psychiatric services unit for hallucinations for the past two days. He denies feeling sad or having SI or HI, or aggression. MSE reveals normal concentration, language, and thought associations, but possible abnormal memory.

• Past Psychiatric History: none (confirmed by his wife and PCP); recent visit to PCP did not indicate dementing illness or new complaints

• PMH: multiple medical problems including DMII, HTN, CKD, COPD, a-fib, previous MI, severe bilateral auditory impairment and significant macular degeneration with limited vision

• SH: retired, lives with his wife

• FH: no psychiatric family history

• PE / ROS: AAO x 3, reports shoulder pain but denies any other symptoms; nothing indicating infection or metabolic disturbance is evident on exam

• Labs and VS: stable and consistent with findings at previous visits to PCP

• Imaging: a CT of the head performed more than two years ago after a syncopal episode revealed mild cortical atrophy and chronic small vessel changes. No clinical signs or symptoms were found to warrant new imaging.

• Medications PTA: medications for chronic medical problems, no psychotropic medications

Case details

• Initial diagnosis and plan:

  • Axis I: Psychosis NOS. R/O dementia type.
  • Axis II: None
  • Axis III: See PMH
  • Axis IV: Good family support, insurance, lives with wife
  • Axis V: 21-30
  • Plan: risperidone 0.25 mg by mouth at bedtime. Consider starting donepezil.
Charles Bonnet Syndrome

- Visual hallucinations in patients with loss of visual acuity or visual field and in the absence of a psychiatric disorder
- First described by Charles Bonnet
  - Noted hallucinations in his grandfather suffering from bilateral cataracts

Source: 1

Charles Bonnet Syndrome

- No specific diagnostic criteria
- Considered rare 1760 → 1989: 46 patients
  - under or misdiagnosed?
  - patients often won’t report symptoms
  - 15%
- Patients usually are aware of the unreal nature of VH

Source: 2

Charles Bonnet Syndrome

- Pathophysiology: A release phenomenon
  - De-afferentation of the cerebral cortex
  - Similar to phantom limb syndrome
  - Brain fills in gaps of visual information with its own

Source: 3

Case details

- **PMH**: multiple medical problems including DMII, HTN, CKD, COPD, a-fib, previous MI, severe bilateral auditory impairment and significant macular degeneration with limited vision
- **SH**: retired, lives with his wife
- **FH**: no psychiatric family history
- **PE / ROS**: AAO x 3, reports shoulder pain but denies any other symptoms; nothing indicating infection or metabolic disturbance is evident on exam

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Charles Bonnet Syndrome

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From the patient’s perspective…

Borrowed from: http://scienceattic.com/tag/linux/

From the patient’s perspective…

From the patient’s perspective…

Case continued: Does my patient fit the bill?

- Common patient characteristics reported in the literature:
  - Complex hallucinations
  - Mean age 70-85
  - Cognitive impairment
  - Cortical atrophy
  - Cerebrovascular disease
  - Social deprivation

Case continued: Do we need to adjust his treatment?

- Nonpharmacologic treatments
  - Patient reassurance
  - Forced blinking
  - Increased illumination
  - Reduced social isolation

- Pharmacologic treatments
  - Atypical antipsychotics
    - Olanzapine, aripiprazole, risperidone
  - Some additional literature on: AEDs, AChEIs, antidepressants

Source: Issa
Case continued

• **Hospital course:**
  – The patient was admitted for a total of seven days.
  – By day four, the attending psychiatrist noted the patient’s significant visual disturbance, lack of delusions, and continued complex hallucinations and introduced the diagnosis of Charles Bonnet Syndrome.
  – Risperidone was increased to 1 mg at bedtime and by discharge the patient denied hallucinations. Follow up for eye care, cognitive testing, and management with his PCP were arranged.

Take home points

• CBS is often **underreported**
  – Patients are usually fearful
• CBS is often **misdiagnosed** or goes unrecognized
• Evaluate all patients with visual impairment
• Consider this diagnosis for patients with these traits who have been labeled with dementia
• Advocate for nonpharmacologic therapies
• Use drugs when necessary (low dose SGA may be beneficial) – reevaluate periodically

Source: 4, 5

Differential diagnosis

<table>
<thead>
<tr>
<th>Etiology</th>
<th>Features</th>
<th>Location</th>
<th>Triggers</th>
<th>Duration</th>
<th>Frequency</th>
<th>Weight</th>
<th>Other Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBS</td>
<td>Simple or complex</td>
<td>Monocular or binocular</td>
<td>Dim lighting, Social isolation</td>
<td>Varied</td>
<td>Frequent</td>
<td>Often intact</td>
<td>Related to underlying condition</td>
</tr>
<tr>
<td>Psychiatric Illness</td>
<td>Complex often with auditory hallucinations</td>
<td>Binocular</td>
<td>None</td>
<td>Varied</td>
<td>Frequent</td>
<td>Usually absent</td>
<td>Disordered thoughts, delusions, affective symptoms</td>
</tr>
</tbody>
</table>

Source: 4

Let’s check if we learned something…

• RG is a 78 year old female presenting to the ER with her husband complaining of “seeing faces around my house, I don’t know what’s going on”. She describes complex hallucinations occurring during the day, but does not find them frightening.

• PMH: DMII, ischemic stroke 3 months prior, unilateral cataracts
• PPH: MDD (last episode 5 years ago)

Which of the following additional pieces of information in this case would be indicative of CBS rather than psychiatric or neurologic illness?

• A. Hallucinations are recognized as unreal by the patient
• B. Persecutory delusions are present
• C. Patient is complaining of sadness, loss of interest and past MDD episodes were associated with psychosis
• D. The patient has a fluctuating LOC, fever, and was recently diagnosed with a UTI

In treating RG’s hallucinations, ________ could be recommended as a nonpharmacologic option while ________ is appropriate to consider if drug therapy is necessary.

• A. CBT; high dose haloperidol
• B. Increased time alone in a dimly lit area; low dose amitriptyline
• C. Keeping eyes open until hallucinations disappear; memantine
• D. Forced blinking; low dose atypical antipsychotic
References

4. Pelak VS. Visual release hallucinations (Charles Bonnet syndrome). In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. (Accessed on February 18, 2014)

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