Visual hallucinations: I can not believe what is happening in front of my eyes

Introduction

An elderly woman was admitted to the emergency department after sustaining a fall with no injury. She presented as confused and reported experiencing visual hallucinations. Further assessment revealed no evidence of delirium, but rather a year-long history of complex and recurrent visual hallucinations in the form of people and animals, on a background of significant visual impairment. The patient suffers from a well-recognized but rare syndrome, which was first described in the 18th century.

Discussion

Charles Bonnet first described the phenomenon of visual hallucinations occurring in patients with significant visual impairment in 1760. He noted that his own grandfather, almost completely blind with bilateral cataracts, reported vivid hallucinations of men, women and birds among other things (Vukicevic and Fitzmaurice, 2008).

Visual hallucinations in patients with Charles Bonnet syndrome are frequently under-reported for fear that symptoms are a manifestation of a mental health disorder. On occasion, the visual hallucinations can cause distress and negatively impact on quality of life, but by and large they do not have an emotional impact or personal meaning as most patients retain insight into their problem (Scott et al, 2001). Case reports indicate that the syndrome is generally not well recognized by physicians and patients are often misdiagnosed with either a dementia syndrome or psychotic disorder (Siatkowski et al, 1990). It is important to remember that Charles Bonnet syndrome can occur alongside and is associated with dementia, cognitive impairment, cerebrovascular disease and advanced age. It is found more frequently in patients with macular degeneration (Holroyd et al, 1992).

The hallucinations are thought to be the result of disinhibition of the visual cortex (Cogan, 1973). They more frequently occur with eyes opened (rather than closed) and are often complex, formed and vivid (Teunisse et al, 1996). Hallucinations may manifest themselves in a variety of ways – they have been reported to be static, animated or moving across the field of vision (Teunisse et al, 1995; Nesher et al, 2001). Patients may report that their hallucinations disappear if they close or avert their eyes from what they see (Baier et al, 2010).

The differential diagnosis includes migraine, seizure disorder, dementia with Lewy bodies, Parkinson's disease, drug or alcohol intoxication or withdrawal, metabolic encephalopathy, delirium, brainstem disorders, sleep disorder, e.g. narcolepsy, psychiatric disease and retinal disease.

All patients with new onset visual hallucinations should have a full neurological assessment, medications should be reviewed and in the presence of known ocular disease (e.g. macular degeneration) further tests and investigations may not be required. However, in the absence of known eye disease, a complete ophthalmological evaluation with visual acuity testing should be performed. Furthermore, psychiatric evaluation, drug screening, magnetic resonance brain imaging and electroencephalography may be indicated.

Reassurance is the mainstay of treatment and physicians must discuss this phenomenon with the patient, reminding him/her of the harmless nature of the hallucinations. If hallucinations are particularly troubling then a trial of low dose atypical antipsychotics, cholinesterase inhibitors or antiepileptic drugs may be considered, all of which have anecdotal evidence of efficacy. BJHM

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Case Report

An 84-year-old woman presented following a fall. She had no injuries, appeared confused and reported experiencing visual hallucinations. A Mini Mental State Examination (MMSE) score was 20/30 with no features of delirium. Comorbidities included hypertension and an infrarenal aortic aneurysm. Prescribed medications were sotalol, atorvastatin and Fultium D_3. There was no history of alcohol use and a collateral history established that she lived alone without professional carers. A friend visited once daily to help with household tasks.

On admission vital signs were normal, there was no evidence of any injury and neurological examination showed no clinical evidence of Parkinsonism.

Blood testing revealed a normal full blood count and electrolytes and slightly impaired renal function. Urine dipstick test showed no abnormality and culture did not yield growth of micro-organisms. A chest radiograph showed no abnormality.

Unenhanced computed tomography and magnetic resonance imaging of the brain demonstrated established cerebellar infarcts with a background of generalized cerebrovascular disease. There was no evidence of an acute ischaemic lesion, a space-occupying lesion or an extra-axial collection.

An ophthalmology assessment concluded a diagnosis of bilateral primary open angle glaucoma with previous left trabeculectomy, bilateral pseudophakia and bilateral age-related macular degeneration. Visual acuity was 6/60 bilaterally.

On further questioning the patient reported visual hallucinations usually in the form of family members, strangers and cats. This was corroborated by a friend, who reported that the hallucinations had been ongoing for a year but had recently become worse. Initially the hallucinations were familiar people or objects, but were now more frequently unfamiliar, occurring at random and lasting less than 5 minutes without causing distress.

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LEARNING POINTS

- Charles Bonnet syndrome is a rare condition, unfamiliar to clinicians and the wrong diagnosis can lead to stress and anxiety for elderly patients.
- To diagnose Charles Bonnet syndrome clinical assessment should include a detailed history (including collateral history), neurological and ophthalmological assessment, and relevant investigations.
- Reassurance and education may provide significant relief to an elderly patient already struggling with failing vision, social isolation and other comorbidities.

A combination of pulmonary artery aneurysm and deep vein thrombosis

A 31-year-old Caucasian male presented with fever, chest pain and haemoptysis. He had been being investigated for recurrent deep vein thrombosis and multiple bilateral pulmonary embolisms episodes over the last year.

A computed tomographic pulmonary angiogram showed progression of his pulmonary emboli despite a therapeutic international normalized ratio. It also showed a segmental pulmonary artery aneurysm (*Figures 1a* and *b*) which led to a unifying diagnosis of atypical Behçet's disease, aka Hughes–Stovin syndrome.

Immunosuppression with prednisolone and azathioprine led to complete resolution of the pulmonary aneurysm. There was no recurrence or extension of his deep vein thrombosis or pulmonary emboli and he remained anticoagulated.

Hughes–Stovin syndrome is a *forme fruste* (incomplete form) of Behçet's syndrome characterized by recurrent thrombophlebitis, deep vein thrombosis and multiple pulmonary and/or bronchial aneurysms (Khalid and Saleem, 2011). Unlike those with Behçet's disease, patients with Hughes–Stovin syndrome tend not to have oral or genital ulcerations, skin lesions, iritis or arthralgia (Erkan et al, 2004). BJHM

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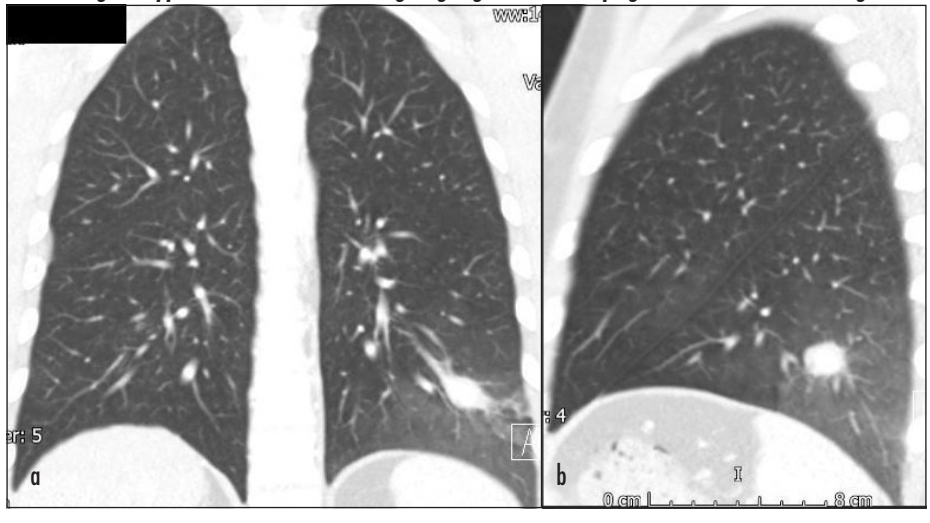
Figure 1. a. Segmental pulmonary artery aneurysm in the left lower lobe of lung with overlying thrombus. b. Ground glass appearance of the surrounding lung segment is in keeping with a recent haemorrhage.



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