Charles Bonnet Syndrome (CBS) – Visual Hallucinations associated with poor vision

Key learning points

- Charles Bonnet was a Swiss lawyer (1720-1793) and he first described the silent benign visual hallucinations of his poorly sighted grandfather in 1769.
- CBS is common – may occur in 40-60% of older adults with poor sight (AMD, diabetic retinopathy, glaucoma).
- There is under-recognition of CBS and lack of awareness of the condition amongst health professionals.
- Many patients will not discuss their symptoms for fear of being labelled demented. Others may be misdiagnosed and treated for non-existent psychiatric disease.
- CBS typically has no associated cognitive impairment. The differential diagnosis of visual hallucinations includes neurodegenerative conditions and psychoses.
- Can make people insecure about home and environment – though the majority have insight that the visions are not real.
- Fore-warning when someone has low vision may prevent negative experience of CBS.

Definition, prevalence and aetiology

- Visual hallucinations (VH) have been described as ‘visual percepts experienced when awake which are not elicited by external stimuli’.
- CBS is defined as simple or complex VH in mentally healthy people often associated with poor sight without other sensory effects.
- Prevalence appears to be equal between the sexes.
- Although predominantly occurring in older adults, it has been described in children but is not described in those born blind.
- Thought to be caused by lack of afferent inhibition at the level of the thalamus or visual cortex.

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Symptoms and signs

- Hallucination characteristics: Simple flashing lights (40-80% especially at beginning), may evolve into people or animals (50-80%), patterns (55%) including brick like structures and swirling orbital structures, faces (40%), often distorted or cartoon. Gargoyle type images are common, and cause distress. Often patients experience hallucinations of children playing at the bottom of the bed, or trees and plants appearing in the room.
- CBS hallucinations are colourful, vivid, clearer and more detailed than normal vision. They have no personal meaning or association unlike VH associated with psychoses.
- CBS is reported to start in first weeks to months after sight loss, often described as transient, but may recur or persist for many years.
- In one study of 492 people with CBS, 75% reported symptoms at 5 years or more.
- This research indicated that 30% have negative experience of VH, especially initially – the images induced fear and affected daily activities. A negative outcome was more common in those who had not known about CBS at the onset of symptoms[1].
- CBS only affects sight – with no delusional aspects. The patient is often aware that they are not really there.
- CBS is more frequent in the aged, at night or in poor light with social isolation and sensory deprivation.

Differential diagnosis

- Complex visual hallucinations occur in neurodegenerative diseases and in other neurological and psychiatric conditions[2]
- Up to 1/3 of normal individuals experience VH prior to falling asleep and immediately on waking.
- In addition, unreal visual perceptions can occur in migraine, epilepsy, brainstem and thalamic lesions, Parkinson's Disease, Lewy body dementia, affective disorder and schizophrenia.
- They may occur with alcohol, barbiturate and benzodiazepine withdrawal.
- It is important to exclude these conditions when making a diagnosis of CBS and using simple cognitive tools (e.g. Mini-mental state examination) has been suggested[3]

Non-drug therapies

- Talking about it with others can help people with CBS develop positive coping strategies. **Reassuring the patient is probably the most helpful thing that a GP can do – it reduces fear and anxiety and distress significantly.**
- Eye movement exercises, closing the eyes, improving illumination may cause CBS to disappear.
- Ensuring that all has been done to improve reversible vision loss. If vision improves, CBS has been reported to disappear.
- Making best use of vision the patient has – optimal colour, brightness, illumination.
- Important to ensure that all those working with people with poor vision know about the condition to advise and reassure[4]

Pharmacotherapy: Acetyl cholinesterase inhibitors

- No known drug treatment though there are several reports of use of anti-epileptic drugs such as carbamazepine and clonazepam .
- It is recommended to review current drug therapy to prevent drug related symptoms.

Support and information provision

- The GP is in a good position to provide support to people with additional depressive symptoms.
- The Macular Society (www.macularsociety.org) provides both emotional and practical support for people living with vision loss.

Useful Resources

- The Macular Society information on visual hallucinations and leaflet for patients and carers to download or listen available at http://www.macularsociety.org/about-macular-conditions/Visual-hallucinations
- RNIB information and advice available at http://www.rnib.org.uk/eye-health-eye-conditions-z-eye-conditions/charles-bonnet-syndrome
- Explanation and images – links to other websites from http://www.visionaware.org/info/your-eye-condition/guide-to-eye-conditions/charles-bonnet-syndrome/125

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