

LETTERS

Charles Bonnet syndrome: a case report of black and white visual hallucinations

Dear Editor,

Charles Bonnet Syndrome (CBS) is characterized by significant deterioration or loss of visual acuity, visual hallucinations, and intact cognitive status (diagnostic triad)¹. Visual CBS hallucinations are usually vivid, colored, and complex, with persons occupying key roles, while occasionally elementary, geometric, colored hallucinations are also reported². Some patients are reluctant to reveal their hallucinatory experiences due to their fear of being perceived as insane³. Atypical CBS is a variant of the syndrome associated with severe mental health problems, e.g., dementia or major depressive disorder. Visual CBS hallucinations are experienced by the patients mostly as neutral or amusing and occasionally as distressful². No conclusive remarks have yet been reached regarding CBS pathogenesis, whereas similarities between CBS and phantom sensations from other sensory modalities may suggest a similar underlying mechanism that should be further explored³. The deafferentation hypothesis is most commonly accepted to explain CBS, suggesting that the visual association cortex remains hyperactive in CBS patients with macular degeneration due to loss of visual input¹.

A 60-year-old female with clinical presentation of CBS is reported, who demonstrated solely not colored visual hallucinations. Her visual acuity suffered a dramatic deterioration in the preceding nine years caused by bilateral macular degeneration (visual acuity: 1/10 on the left, 0/10 on the right due to chorioretinal atrophy). During these years, following her visual loss, she experienced periodical incidences of black and white visual hallucinations with cemeterial and necrological thematology in colorless landscapes, as well as geometrical colorless visual hallucinations. She had a positive family history of temporal arteritis on her mother's side. The patient suffered from a longstanding unspecified depressive disorder and was treated with mixed anxiolytic and antidepressant regimens (alprazolam, duloxetine, venlafaxine, and quetiapine) that did not have any impact on the periodic episodes of visual hallucinations. She was aware of her hallucinations' unrealistic nature that usually overwhelmed her with distress and sorrow. Her dreams were differentiated by their content and the presence of colored images. Her cognitive status was evaluated as intact with the Mini-Mental Status Examination (score 25/30, missing only five tasks that require normal vision), the Controlled Oral Word Association Test (score: -30), and the Ray Auditory Verbal Learning Test (span: -0.63, learning: -0.68, Im.Rec: -0.85, Del.Rec: -0.67), while her brain computed tomography was normal.

Although colorless hallucinating patterns have been reported in a few rare CBS cases⁴ literature search does not reveal any similar CBS incident of black and white visual hallucinations in which the hallucinating subject does not play a pivotal role. The obituary content of our patient's visual hallucinations also represents a distinctive CBS manifestation. Her visual CBS hallucinations have always been uncoloured. Thus, no change in their nature that might be associated with a traumatic life event, as indicated in scientific reports³, could be stressed. Therefore, new notions regarding the enlargement of the phenomenological approach, depiction of clinical demonstrations, and underlying pathophysiological mechanisms of CBS have emerged. Our patient's black and white visual hallucinations may suggest the involvement in their pathophysiology of ventral occipitotemporal cortex areas that are thought to be associated with acquired cerebral achromatopsia instead of the increased ventral extrastriate activity pattern that fMRI studies support for typical CBS⁵. Even though she meets only two diagnostic criteria for atypical CBS (prolonged stressful reaction towards visual hallucinations and positive personal psychiatric history), the colorless, obituary, not person-focused content of her hallucinations comprises a unique clinical manifestation of CBS⁶.

Keywords: Charles Bonnet syndrome, visual hallucinations, phantom sensations

Conflict of interest

No conflict of interest to declare.

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