

CHARLES BONNET SYNDROME

THE OCCURRENCE OF VISUAL HALLUCINATIONS IN PATIENTS WITH AGE RELATED MACULAR DEGENERATION (AMD)

Dr. Paul Beaumont, 2008

Charles Bonnet syndrome (CBS) is a syndrome first described in 1769 by Charles Bonnet (1720-1792), an eminent naturalist and philosopher who described the visual hallucination suffered by his grandfather. It was named in 1937 by George de Moasier whom, like Charles Bonnet, was a native of Geneva Switzerland. CBS is the occurrence of complex visual hallucinations in patients with acquired vision loss, due to eye diseases such as age -related Macular Degeneration (AMD), in patients without cognitive impairment.

CBS is thought to occur due to damage of the sensory nerve fibres in the cerebral cortex, the outer layer of the cerebrum in the brain. The cerebral cortex is associated with higher brain functions, voluntary movement, coordination of sensory information, learning and memory. A simple explanation is that the visual hallucinations experienced by some people with vision loss is like the phantom limb sensations that people suffer when they have a limb removed.

CBS hallucinations are characterised by an absence of personal meaning in the content and in some cases can disappear by shutting the eyes or changing the environmental conditions. For example, if the hallucinations occur in the dark, then try switching on the light. Some people also find that moving their eyes back and forth helps. Hallucinations may include people, buildings, landscapes, faces, animals, ants, lattice work or bright lights etc. Musical hallucinations are more common in patients with acquired deafness as well as vision loss.

Research has identified that CBS is common in patients with low vision. In a recent study 24% of the 50 patients in a low vision clinic had visual symptoms of CBS and half of them were experiencing daily hallucinations. In a prospective study in the Netherlands the prevalence in patients with AMD with low vision was 11% and it was associated with acuity of 0.3 in the best eye. Complex hallucinations tend to occur in people with a lower acuity and more extensive field loss and low quality social contacts.

It is common that patients who suffer from visual hallucinations are often extremely worried that they are losing their mind. It is important that patients are informed that experiencing visual hallucinations after vision loss is common and not a sign of dementia or mental illness. Simply knowing this is of great comfort and improves the quality of life of these patients and for majority of cases treatment is not necessary.

CBS not only occurs in patients with AMD but also in other diseases that affect the brain and eyes. In patients who have brain surgery resulting in a hemianopia (blindness in half the visual field), the hallucinations tend to resolve over a period of weeks. While patients with pituitary tumours in the brain found that the hallucinations were replaced by sparkling lights when the tumour was removed. CBS has also been found to occur in patients with cataracts following the removal of the opacities, those undergoing dialysis with erythropoietin, and in women undergoing oestrogen replacement. In certain cases the incidence of CBS may be reduced by low vision rehabilitation.