

Bonnet's syndrome in ophthalmology: literature review

Síndrome de Bonnet na Oftalmologia: revisão de literatura

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ABSTRACT

With the increase of longevity and the quality of life, the number of people with low vision due to senility tends to grow up. Charles Bonnet's syndrome (SCB) was cited in the XVIII century by Bonnet, when his grandfather blinded by cataracts and psychologically healthy cites visions of men, women, birds, and buildings. The main risk factor is low vision. Several ocular diseases may be involved as cataract or use of some medications. Although known, it is poorly diagnosed by neurologists, ophthalmologists and psychiatrists. To date there is no consensus on the treatment of Charles Bonnet's syndrome.

Keywords: *Low vision; Hallucination; Elderly health*

RESUMO

Com o aumento da longevidade e da qualidade de vida da população, o número de pessoas com baixa visão pela senilidade tende a crescer. A síndrome de Charles Bonnet (SCB) foi citada no século XVIII por Bonnet, quando seu avô, psicologicamente saudável e cego por catarata, citava visões de homens, mulheres, pássaros e construções. O principal fator de risco é visão diminuída. Algumas doenças oftalmológicas podem estar envolvidas como catarata ou uso de algumas medicações. Apesar de ser conhecida, é pouco diagnosticada por neurologistas, oftalmologistas e psiquiatras. Até o momento não existe um consenso no tratamento da síndrome de Charles Bonnet.

Descritores: Baixa visão; Alucinação, Saúde do idoso

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INTRODUCTION

Low vision is one of the most disabling causes for people. In the elderly, the ocular structures undergo changes, and the decline of the visual function is inevitable, being the third cause of functional disability in this population.^(1,2) Most of them do not report vision complaints because they consider this weakness typical of old age, that is why it is barely detected in the clinical practice.^(3,4)

In the eighteenth century, the philosopher Charles Bonnet reported symptoms reported by his grandfather, Charles Lullin, a 90-year-old man blinded by cataracts, describing vision of men, women, animals, plants, and objects. Except for cataract blindness, he did not present any other pathologies. Even Bonnet got old and presented a similar clinical condition, and later his name was used to describe the syndrome.⁽⁵⁻⁸⁾

Charles Bonnet syndrome (CBS) is more common in the elderly and in association with reduced visual acuity. Most of these patients do not have cognitive or psychiatric disorders, and are aware of the unreal nature of the facts.^(5,7,9)

This disease is poorly diagnosed by psychiatrists, ophthalmologists and neurologists, although it has been cited since the 18th century.^(5,6,10) In general, the affected population reaches 0.5% to 1.4%, depending on the study, and it is said that the Asian population is more affected. In Japan, more precisely in the city of Kitakyushu, a study was carried out diagnosing CBS in elderly patients with low vision of 0.8%. In New Zealand, 500 patients were treated in the ophthalmology service, with an incidence of 11% of the disease.^(6,10,11)

CBS is characterized by the presence of complex and isolated, persistent or repetitive, colored visual hallucinations in which people, trees, animals in motion are visualized, but they cannot be touched or heard. The duration can be of seconds to the whole day, extending for days or years and varying in frequency and complexity. Some types may or may not go away when the eyes are closed, especially when associated with poor visual acuity. The most common ophthalmic pathologies associated are: age-related macular degeneration (AMD), followed by glaucoma and cataract. However, patients suffering from a sudden onset of vision loss and visual field associated with brain disease are more likely to experience hallucinations than those with gradual loss of vision.^(5,10,12-15)

The main triggering factor is low lighting. Social isolation, fatigue, weak light conditions at night, and states of drowsiness or relaxation have been associated with higher rates of recurrence. There are also reports of hallucinations with the use of some drugs such as antibiotics, hormones and of cardiovascular action. Brimonidine tartrate, eyedrops frequently used in the treatment of glaucoma, is also reported to induce seizures, which are controlled after discontinuation of the drug.^(6,14,15)

A study published in 2015 describes women over 80 years old and with a vision to count fingers at 1 meter as the most affected ones, and that 40% of patients who hallucinated had no triggering factor.⁽⁸⁾

Among the theories attempting to explain visual hallucinations in CBS, the most accepted one is that the reduction or absence of visual stimuli would initiate the disorders by reducing the suppression of superior cortical centers, promoting the release of perception, which results in phantom visions. The possibility of "sensitive deprivation" combined with the release of the thalamic-cortical pathways and molecular and biochemical

alterations that may affect GABA A and GABA B7 receptors has also been exposed was also considered.^(5,6,10,16)

The differential diagnosis can be made several neurological and psychiatric pathologies, such as: dementia with Lewys bodies, Alzheimer's, Parkinson's, delirium, schizophrenia, bipolar disorder, epilepsy, auricle migraine, hysteria, psychosis, temporal arteritis, cortical lesions, extreme exhaustion conditions.^(5,6,8,17)

The approach is multidisciplinary: psychiatry, ophthalmology and neurology. Fear of the stigma of psychiatric illness causes patients to hide their symptoms, making diagnosis difficult. The patient's awareness that CBS is not a mental illness reduces their and the family's anxiety.^(6,18,19)

The treatment aims at ceasing hallucinations. However, to date, there is no therapeutic consensus for this condition. The visions of some patients disappear without intervention. Authors suggest that treatment should be performed if hallucinations are frequent, causing anxiety or altering the patients' quality of life. Measures such as improving home lighting and social contact, wearing corrective lenses, cataract surgery, or treating other conditions to improve vision can be effective. However, in some cases the hallucinations cease as the vision worsens or disappears completely.^(18,20)

Some mention the benefit of medications such as risperidone, cisapride, valproate, carbamazepine, clonazepam, selective serotonin reuptake inhibitors, gabapentin and olanzapine. In cases of patients who developed the syndrome after using specific medications, it is necessary to interrupt their use.^(6,18,20)

FINAS CONSIDERATIONS E PERSPECTIVES

Decreased visual function is associated with alterations in the quality of life and reduced functional activities in elderly patients, which may lead to isolation, disturbance, loss of health and dignity.

With increasing longevity, the number of people affected by CBS tends to grow. The diagnosis and early understanding of this form of benign hallucination is essential in the attempt to minimize the impact on the life of the patient and their relatives.

Currently, health professionals are not prepared to differentiate it from other hallucinatory senile conditions, impairing the onset of treatment or even instituting the wrong treatment.

Educational campaigns among ophthalmologists, geriatricians, and professionals dealing with senile patients implementing an active search in patients with visual complaints associated with low vision would be an effective measure to improve treatment. However, a greater number of studies is necessary to improve knowledge on the cause, and to create a standardized treatment routine.

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