Editorial

Non-organic visual loss

Pérdida visual no orgánica

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Today's progressive ophthalmology sub-specializations and rapid technological advances in instruments, tools and devices, which are being renewed and updated constantly, immerse us in the hectic world of increasingly acute and accurate imaging and diagnostics. In short, the ever-growing diagnostic capability of our times makes it possible to reach neuronal and molecular intimacy levels of various ocular structures. This is a technological advance that makes us proud of humankind and science’s ability to improve with seemingly endless exponential growth.

However, non-organic vision loss (NOVL) is an ocular disease that disconcerts us, due to its complexity and difficult approach and the wide range of consequences it generates: health costs, consultation saturation, involvement of different specialties and subspecialties, distress of patients and their families, and also of doctors, as we are unable to determine an accurate diagnosis at times. And this implies many legal repercussions. And despite technological advances and diagnostics, ophthalmologists often face NOVL cases and are powerless to confront difficulties in diagnosing and addressing this complex disease that goes back as far as the beginning of mankind.

In the past century, the work of highly professional ophthalmologists with great intellectual qualities, many of them involved with the military, created a school of physicians who developed numerous tests and methods to diagnose NOVL excluding organicity.\textsuperscript{1,2} The manual titled “La Simulación en Ergooftalmología” [Feigning in Ergo-ophthalmology], 1985 by Dr. Mario Esteban de Antonio\textsuperscript{1} is an example of advanced knowledge developed and generously shared with everyone, which is still valid in our times. Subsequently, Dr. Diego Zarco Villarosa\textsuperscript{2} updated knowledge on outpatient diagnostic techniques, presented in his work “Simulación y disimulación en Oftalmología. Técnicas ambulatorias de diagnóstico” [Feigning and Concealment in Ophthalmology: Outpatient Diagnostic Techniques] in 2005.

NOVL is still baffling to us, both for children and adults. In short, this consists of ocular symptoms, especially loss of vision without an organic base to justify it. This is a similar disease, but with different etiology and prognosis, which implies a different approach in the two age groups. Adults feign in order to obtain some sort of benefit or as a result of psychiatric illness. In children, though it is generally a more favorable process, major psychiatric related illness must not be ruled out.\textsuperscript{3-8}

It is estimated that NOVL represents 1% of adult visits to ophthalmology emergency rooms in our area, and 5% of children seen in outpatient or outpatient ophthalmology.

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departments. It is therefore, a disease that any ophthalmologist may have to confront, regardless of the subspecialty he/she performs. Knowledge of this disease and diagnostic techniques, which are easy to apply in many cases, can solve complex and variegated clinical symptoms, which, if left unresolved, will become chronic and complicated, involving other specialists and requests for new diagnostic tests.

Suspected NOVL, both in children and adults, happens when ocular or vision symptoms are detected with a rigorously normal scan. This examination must include: visual acuity, examination of anterior and posterior poles, analysis of refraction with and without cycloplegia, intrinsic and extrinsic intraocular pressure and ocular motility study. A question arises, therefore, given the disparity between the patient's examination and symptoms, always keeping in mind the possible presence of organicity.

**Non-organic vision loss in adults**

NOVL occurs in adults as two clearly distinct processes. This NOVL may be due to patients trying to mislead to obtain a benefit, mainly financial or work related (sick leave, job change, compensation, etc.). Although NOVL may also be caused by psychiatric illness, listed as such in ICD-10 (F44 conversion dissociative disorder) and DSM-IV (factitious disorder). Feigned disease reported by patients may be caused, alleged, exaggerated or imputed illnesses.

NOVL usually occurs in adults as a bilateral or unilateral decrease in vision or even amaurosis typically related to a previous head injury. Rarely, the patient feigns a visual field disorder or disorder of ocular motility by constant muscular effort required to keep performing the symptoms.

Addressing NOVL can become very complex; therefore, developing multidisciplinary units consisting of neurology, psychiatry and ophthalmology is recommended to optimize resources and consolidate criteria.

**Non-organic vision loss in children**

NOVL in children is a complex clinical condition completely different than the process that may occur in adults. NOVL in children has a different etiology and prognosis. The reason why a child feigns vision loss usually has no clinical impact, and in 40% of cases, patients simply want to wear glasses.

They are usually girls between 9 and 11 years of age, with onset over the first school term and appearing less frequently during summer break and Christmas. NOVL usually occurs in children as bilateral decreased vision, which may be accompanied by other symptoms such as headaches, difficulty focusing, diplopia or photophobia. The symptoms are usually bilateral; thus they justify difficulty in attending school and performing homework. Visual field disorder is not usually presented as NOVL because children are unaware of the possibility of visual field defects and, therefore, cannot feign them. If the suspicion of visual field disorder is confirmed, the child must be referred to the neurology or emergency room for potential organic disease.

Child NOVL has a good prognosis and parent collaboration is essential. Explaining the nature of the process and benign nature of the condition is usually enough for a progressive change toward normality. Several successive check-ups within 2–3 months, confirm this trend in most children once the parents are aware of NOVL. Excess extracurricular activities, school competitiveness, lack of rest and leisure time from an early age are factors that influence NOVL development and must be corrected by parents.

Although 40% of children with NOVL just want glasses, maybe simply because a classmate wears them under prescription, coexistence of associated psychopathology must not be ignored; this has been described in up to 30% of children with NOVL as hyperactivity, anxiety, depression or attention deficit [disorder].

The medical approach regarding children with NOVL has evolved in recent decades. In the 80s it was treated by administering placebos, such as saline and methylene blue injections. Later, the choice was abstaining from treatment and limited to informing parents of the NOVL process experienced by their children. Today, multidisciplinary intervention by primary care, pediatrics, child psychiatry and ophthalmology teams is recommended because of the high percentage of associated psychopathology in children with NOVL.

**Outpatient diagnostic techniques**

When justified NOVL is suspected, a defensive approach can be adopted by referring patients to different subspecialities, such as neuro-ophthalmology or retina units, as well as emergency room, neurology and radiology. However, knowing the various existing diagnostic tests can help resolve numerous outpatient NOVL cases successfully by stopping the progressive and unstoppable circle of referrals to different units.

There are numerous diagnostic tests, namely the mirror test and its Barthelemy variant, Roth or writing test, special optotypes for recording visual acuity (Sellas, Terson and Thibaudet) or Bonnet or Brabais test. Using visual field programs such as the binocular Esterman is highly useful in unilateral amaurosis. The confusion test is very useful and easy; it uses lenses to disconcert patients (mainly children with NOVL), and also the binocular vision test, because good stereopsis is incompatible with vision deficiencies. The ophthalmologist’s approach to NOVL patients must be slow and relaxed, and several sessions may be necessary to unmask those who are feigning, especially older people.

A little over 100 years ago, Santiago Ramón y Cajal received the Nobel Prize in 1906 for his theory differentiating neuronal cell individuality in the brain formed by neurons. His faithful description of retina layers and the major cell types that compose it, observed in optical microscope slices, continues to fascinate us in our time because of its detailed description, which can be extrapolated to current optical coherence tomography. However, despite the amazing advances of science in general, and ophthalmology in particular, allowing us to observe cellular and retinal intimacy and all those layers described by Ramón y Cajal, NOVL continues to baffle us, and in many occasions leaves us powerless over its approach.
REFERENCES