ACUTE MACULAR NEURORETINOPTHY

NEURORRETINOPATÍA MACULAR AGUDA

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ABSTRACT

Clinical case: A 22-year-old woman complained of symptoms consistent with the sudden onset of central scotomas in both eyes after a flu-like illness. The typical reddish brown macular lesions of acute macular neuroretinopathy were evident in the parafoveal area of both eyes. Visual field examination revealed central scotomas in both eyes that corresponded in location to the retinal injuries.

Discussion: Acute macular neuroretinopathy is a rare idiopathic posterior uveitis for which no effective treatment is available. Several pathogenic theories are postulated (Arch Soc Esp Oftalmol 2007; 82: 307-310).

Key words: Acute macular neuroretinopathy, posterior uveitis, central scotomas, paracentral scotomas, maculopathy.

INTRODUCTION

Acute Macular Neuroretinopathy (AMN) is an unusual unilateral or bilateral entity of unknown etiology affecting mainly young women between twenty and forty years old. Described for the first time by Bos and Deutmann in 1975 (1), it is classified as one of the posterior uveitis of unknown origin. It is characterized by the sudden appearance of paracentral scotomas with preservation of visual acuity (VA), frequently preceded by flu syndrome.

Ophthalmoscopically round or oval parafoveal, brown-reddish injuries are visualized.

Both the fluorescein angiography (FAG) and neurosensory tests were normal and only alterations...
in the shape of paracentral scotomas in the visual field (VF) were detected.

**CASE REPORT**

A twenty-year old woman was referred by the neurology unit to assess the possibility of a bilateral retrobulbar optic neuritis. The patient reported the sudden appearance of central scotomas and the decrease in visual acuity (VA) in both eyes without associated ocular pain. Her history included a flu involving the high respiratory tract in the previous week and the use of oral contraceptives. At the neurology unit, visual evoked potentials and a magnetic nuclear resonance were normal. Upon ophthalmologic exploration, VA recorded 1 in both eyes; pupillary reflexes were normal, just like the exploration of the anterior pole. Ophthalmoscopic examination of the eye fundus (EF) revealed a series of parafoveal round spots with scarcely defined borders and reddish brown in color in both eyes. VFs presented deep central scotomas which corresponded to the location of retinal injuries (figs. 1 and 2). Both the FAG and the optic coherence tomography (OCT) showed no alterations. One month later, the patient reported a subjective improvement of the VA and central scotomas, although the latter remained stable in the VF.

After six months of evolution, no recurrence took place in her condition, injuries in the eye fundus were less evident but the scotomas in the VF remained stable.

**DISCUSSION**

AMN´s main features are the sudden appearance of unilateral or bilateral central scotomas in young women with a history of viral disease and the development in the EF of parafoveal round spots reddish brown in color. The differential diagnosis needs to be performed with an acute retinal pigment epithelitis which reveals small greyish subfoveal deposits surrounded by a yellowish halo, with the acute posterior multifocal placoid pigment epitheliopathy, the Multiple Evanescent White Dot Syndrome, Central serous chorioretinopathy and optic neuritis.

The pathogenesis is unknown. The likelihood of a vascular etiology (2) has been suggested based on the development of AMN in patients with hypertension caused by sympathetic-mimetics (3), in eclampsia, in the use of contrast for computed tomographies, due to the intake of high doses of caffeine and associated to the use of oral contraceptives (4),
as was the case of this patient. The recent findings by Gómez Torreiro (5), whereby the Scanning Laser Ophthalmoscope (SLO) located the injuries in the outer layers of the retina, together with the reduction observed in the premature potentials for the receptors at the level of the electroretinogram (ERG) (3), confirm that the affectation took place at the layer of photoreceptors, which is consistent with the visualization of the most evident manifestation of injuries through red-free photographs, as shown in the patient (figs. 3 and 4). The selective affectation of photoreceptors could be explained by the development of a self-immune response to the antigens of photoreceptors usually taken from the immune system and then left exposed after a viral infection, a frequent condition in these patients (3). No efficient treatment has been found so far.

In most cases, it is an self-limited process with a history of multiple recurrences in both eyes and persistence of scotomas 9 years after diagnosis.

REFERENCES