



ARCHIVOS DE LA SOCIEDAD ESPAÑOLA DE OFTALMOLOGÍA

www.elsevier.es/oftalmologia



Review

Implications of the anatomical classification of the neovascular form of age-related macular degeneration[☆]

R. Gallego-Pinazo^{a,b,*}, L. Monje-Fernández^c, N. García-Marín^{a,b},
M. Andreu-Fenoll^{a,b}, R. Dolz-Marco^{a,b}

^a Unidad de Mácula, Servicio de Oftalmología, Hospital Universitario y Politécnico La Fe, Valencia, Spain

^b Red Temática de Investigación Cooperativa OFTARED, Instituto de Salud Carlos III, Madrid, Spain

^c Servicio de Oftalmología, Complejo Universitario Hospitalario de León, León, Spain

ARTICLE INFO

Article history:

Received 21 February 2016

Accepted 17 May 2016

Available online xxx

Keywords:

Age-related macular degeneration

Angiography

Optical coherence tomography

Choroidal neovascularization

Geographic atrophy

Antiangiogenics

ABSTRACT

Objective: To present the clinical relevance of the anatomical classification of the neovascular form of age-related macular degeneration (AMD).

Methods: Critical analysis of the current situation in the management of patients with neovascular AMD, by reviewing the available scientific evidence with regard to the classification of the types of neovascular lesion by angiography and optical coherence tomography (OCT).
Results: The classification of the neovascular lesion type secondary to AMD by OCT in type 1 (under the pigment epithelium), type 2 (subretinal), and type 3 (retinal angiomatous proliferation) lesions provides an added value in allowing to establish a long-term visual prognosis, an estimate of the number of treatments that a certain case may require, and a stratification of the risk for secondary geographic atrophy.

Conclusions: Incorporating OCT to the initial qualitative analysis of cases with neovascular AMD offers an added value superior to that provided by the angiography, with the relevant clinical implications.

© 2016 Sociedad Española de Oftalmología. Published by Elsevier España, S.L.U. All rights reserved.

[☆] Please cite this article as: Gallego-Pinazo R, Monje-Fernández L, García-Marín N, Andreu-Fenoll M, Dolz-Marco R. Implicaciones de la clasificación anatómica de la forma neovascular de la degeneración macular asociada a la edad. Arch Soc Esp Oftalmol. 2016. <http://dx.doi.org/10.1016/j.oftal.2016.05.011>

* Corresponding author.

E-mail addresses: robertogallegopinazo@yahoo.es, robertogallego@comv.es (R. Gallego-Pinazo).

2173-5794/© 2016 Sociedad Española de Oftalmología. Published by Elsevier España, S.L.U. All rights reserved.

Implicaciones de la clasificación anatómica de la forma neovascular de la degeneración macular asociada a la edad

R E S U M E N

Palabras clave:

Degeneración macular asociada a la edad
 Angiografía
 Tomografía de coherencia óptica
 Neovascularización coroidea
 Atrofia geográfica
 Antiangiogénicos

Objetivos: Presentar la relevancia clínica de la clasificación anatómica de la forma neovascular de degeneración macular asociada a la edad (DMAE).

Métodos: Análisis crítico de la situación actual de la gestión de pacientes con DMAE neovascular revisando la evidencia científica disponible respecto a la clasificación de los tipos de lesión neovascular por angiografía y por tomografía de coherencia óptica (OCT).

Resultados: La clasificación del tipo de lesión neovascular secundaria a DMAE mediante OCT en lesiones de tipo 1 (por debajo del epitelio pigmentario), de tipo 2 (subretinianas) y de tipo 3 (proliferación angiomasosa retiniana), aporta un valor añadido permitiendo establecer un pronóstico visual a largo plazo, una estimación del número de tratamientos que un caso pueda requerir y una estratificación del riesgo de atrofia geográfica secundaria.

Conclusiones: Incorporar la OCT en el análisis cualitativo inicial de los casos de DMAE neovascular ofrece un valor añadido superior al de la angiografía con implicaciones prácticas relevantes.

© 2016 Sociedad Española de Oftalmología. Publicado por Elsevier España, S.L.U. Todos los derechos reservados.

Introduction

The point has been reached in which discussing the neovascular form of age-related macular degeneration (AMD) has become totally ambiguous and abstract. New imaging techniques and the advent of intravitreal vascular endothelial growth factor inhibitors have modified the natural history of the disease from a progressive and inevitable deterioration of vision from diagnostic to the stabilization, and even improvement, of patients' visual function.¹⁻⁵

However, the group of neovascular AMD patients comprises many variables and variants that at this stage are impossible to identify, preventing us from establishing an adapted prognostic and therapeutic algorithm. The much touted "individualization" of treatments would then be closer to reality. In this context, the main role is played by optical coherence tomography (OCT).

Angiography with sodium fluorescein

In 1991 a classification of neovascular membranes associated to AMD was proposed on the basis of sodium fluorescein angiography (FAG) findings.⁶ This proposal was made in the context of the *Macular Photocoagulation Study* (MPS) registered as NCT00000158. At that time, it was proposed to classify lesions as follows:

- Classic choroidal neovascularization: choroidal hyperfluorescence areas with well-defined margins, distinguishable since early angiogram phases and characterized in late phases by pooling of contrast that blurs the limits of the neovascular membrane.
- Hidden neovascularization, comprising 2 possibilities:

- Fibrovascular pigment epithelium detachment (PED): areas that are not as hyperfluorescent or as well defined as classic lesions in the transient angiographic phase, which at 60–120 s evidence stippled hyperfluorescence, and finally at approximately 10 min leakage or staining occurrences.
- Late leakage of undetermined origin: late hyperfluorescence (2–5 min) speckled with contrast pooling, the origin of which was impossible to identify in previous angiogram phases.

Together with the above criteria, additional characteristics were defined that made it unfeasible to classify neovascular lesions by means of FAG, such as a significant hemorrhages, RPE hyperplasia or fibrotic tissue and serous PED. The researchers in charge of establishing said angiographic criteria in the MPS admitted encountering difficulties in highly relevant areas such as the ability to clearly differentiate lesion types in some patients, defining the precise limits of PED or identifying the specific areas of the neovascular lesion, among others. It is surprising that, with so many limitations, this classification survived and even today remains as the gold standard for classifying neovascular membranes in clinical trials with AMD patients.

Angiography with indocyanine green

The development of angiography with the inclusion of indocyanine green (IGA) partially improved the ability to recognize and define hidden lesions and contributed new concepts to angiographic semiology of neovascular AMD,^{7,8} including:

- Plaque: hypercyanescent areas larger than a disc area that could be adequately or poorly differentiated.
- Hot spot: hypercyanescent areas smaller than a disc area.

Download English Version:

<https://daneshyari.com/en/article/8791573>

Download Persian Version:

<https://daneshyari.com/article/8791573>

[Daneshyari.com](https://daneshyari.com)