ARCHIVOS DE LA SOCIEDAD ESPAÑOLA DE OFTALMOLOGÍA

www.elsevier.es/oftalmologia

Original article

Incidence and clinical outcomes of the different neovascular forms of age-related macular degeneration in Valencia (Spain)☆

L. Monje-Fernández[a,*], *R. Dolz-Marco*[b], *M. Andreu Fenoll*[c], *V. Fornes Ferrer*[d], *R. Gallego-Pinazo*[e,f]

[a] *Departamento de Oftalmología, Complejo Asistencial Universitario de León, León, Spain*
[b] *Fisabio Oftalmología Médica, Valencia, Spain*
[c] *Instituto de Investigaciones Sanitarias La Fe, Valencia, Spain*
[d] *Departamento de Bioestadística, Hospital Universitario y Politécnico La Fe, Valencia, Spain*
[e] *Unidad de Mácula, Clínica Oftalvist, Valencia, Spain*
[f] *Universidad Europea de Madrid, Madrid, Spain*

ARTICLE INFO

Article history:
Received 3 October 2017
Accepted 6 February 2018
Available online 18 May 2018

Keywords:
Neovascular AMD
Incidence
Ranibizumab
Anatomic classification
Optical coherence tomography

ABSTRACT

Objective: To analyse the incidence and outcomes of the different neovascular subtypes in age-related macular degeneration (AMD).
Material and methods: A retrospective review was carried out on patients with neovascular AMD treated in the University and Polytechnic Hospital la Fe in Valencia by the same retinal physician (RGP) between December 2012 and July 2015. The anatomic classification of the neovascular lesions was recorded, as well as the number of intravitreal treatments administered and the change in visual acuity (VA) obtained throughout the follow-up.
Results: A total number of 174 eyes of 156 patients (mean age: 79.9 years) with a minimum follow-up of 4 months were included. The anatomic classification of choroidal neovascularisation (CNV) showed the presence of type 1 lesions in 40,8%, type 2 lesions in 12%, type 3 lesions in 31%, and mixed lesions in 14.4%, with 1.7% showing polypoidal choroidal vasculopathy features. Overall, the mean baseline VA was 0.32, improving to 0.38 at 24 months, after having received a mean of 9.3 injections. Type 2, 3, and mixed forms showed a visual result significantly lower than type 1, but there was no significant difference in the polypoidal vasculopathy.

☆ Please cite this article as: Monje-Fernández L, Dolz-Marco R, Andreu Fenoll M, Fornes Ferrer F, Gallego-Pinazo R. Incidencia y resultados clínicos de las distintas formas neovasculares de degeneración macular asociada a la edad en Valencia (España). Arch Soc Esp Oftalmol. 2018;93:324–328.

* *Corresponding author.*
E-mail address: lauriya58@hotmail.com (L. Monje-Fernández).

Conclusions: Type 1 CNV was the most common finding, and was associated with a better visual prognosis, compared to the other neovascular lesions.

Incidencia y resultados clínicos de las distintas formas neovasculares de degeneración macular asociada a la edad en Valencia (España)

Palabras clave:
DMAE neovascular
Incidencia
Ranibizumab
Clasificación anatómica
Tomografía de coherencia óptica

RESUMEN

Objetivo: Analizar la incidencia y los resultados visuales de cada uno de los subtipos de lesión neovascular en pacientes con degeneración macular asociada la edad (DMAE).

Material y métodos: Revisión retrospectiva de pacientes con DMAE neovascular tratados en el Hospital Universitario y Politécnico la Fe de Valencia por un mismo retinólogo (RGP) desde diciembre de 2012 hasta julio del 2015. Se registraron las formas anatómicas del complejo neovascular, así como el número de tratamientos intravítreos administrados y el cambio de visión obtenido con este.

Resultados: Fueron incluidos 174 ojos de 156 pacientes con una edad media de 79,9 años y un seguimiento de al menos 4 meses. El 40,8% presentaban neovascularización coroidea (NVC) tipo 1; el 12%, tipo 2; el 31%, tipo 3; el 14,4% presentaban formas mixtas y el 1,7%, vasculopatía polipoidea. La agudeza visual inicial media era de 0,32 y de 0,38 a los 24 meses, habiendo recibido una media de 9,3 inyecciones. Las formas neovasculares tipo 2, 3 y mixtas mostraron un resultado visual significativamente inferior a las tipo 1, no existiendo significación estadística en la vasculopatía polipoidea.

Conclusiones: La NVC tipo 1 fue la más observada, y además se relacionó con un mejor pronóstico visual, en comparación con el resto de lesiones neovasculares, en pacientes tratados con ranibizumab.

Introduction

Age-related macular degeneration (AMD) is a neurodegenerative disorder that typically affects individuals over 50 years of age. Nowadays, AMD constitutes a first order social and health problem in all developed countries.[1–9]

AMD is a chronic and progressive disease that courses in several stages, starting with asymptomatic forms leading to severe visual impairment derived from the development of choroidal neovascularization (CNV) or geographic atrophy.[10]

Traditionally, CNV forms have been classified on the basis of their appearance in fluorescein angiography (FA) as classic and occult.[11] Classic CNV is characterized by a well-defined area of choroidal hyperfluorescence from early stages, whereas the occult form evidences undetermined angiographic diffusion with diffused edges. The main limitation of this classification is the difficulty of interpretation in some cases but mainly the limited utilization of FA depending on the workload of ophthalmological practices.

In contrast, spectral domain optical coherence tomography (SD-OCT) has become a basic imaging test as it enables a more precise diagnostic,[12] growing understanding of the physiopathology of the disease, adequate treatment indications and meticulous follow-up of AMD patients.[13] Freund et al.[14] proposed an anatomical classification of neovascular AMD forms based on the findings provided by SD-OCT: type 1 lesions are those that remain confined to the space between the retinal pigment epithelium (RPE) and Bruch's membrane; polypoid neovascularization would be comprised as a subform of type 1 lesions; type 2 lesions grow above the RPE in the subretinal space, while type 3 lesions correspond to retinal angiomatous proliferation (RAP). Of course there are mixed forms with combinations of these subtypes.

The objective of the present paper is to assess the incidence of anatomic AMD subtypes by means of SD-OCT in our environment, as well as the relevance thereof for visual prognosis and the number of injections required.

Material and methods

The present study was approved by the Ethics Committee of the Health Research Institute of the University and Polytechnic Hospital *La Fe* of Valencia, Spain, and was conducted in accordance with the principles of the Helsinki declaration.

A retrospective, observational and longitudinal study that included all patients diagnosed with neovascular AMD who had not received previous treatments, who visited the same retinologist (RGP), from December 2012 to July 2015 and who had a follow-up record of at least 4 months from diagnostic. The study excluded patients with any coexisting ocular