Universidad de Navarra

Máster en Investigación Biomédica
Facultad de Ciencias

Research Project Proposal
Academic year 2016-2017

Project Nº 10

Title:
Comparative study of the different clinical trials of anti-VEGF treatments of neovascular Age-Related Macular Degeneration (nAMD).

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Summary

Age-related Macular Degeneration (AMD) is a complex, very common and multifactorial disease that results from the interaction of genetic and environmental factors (1). Currently late AMD is considered to be the leading cause of irreversible blindness in the elderly in developed countries (2). This disease affects the correct functioning of the macula (responsible for central vision) through damage to the photoreceptors, retinal pigment epithelium, Bruch's membrane and the choriocapillary membrane of this area. Another characteristic of AMD is the appearance of drusen (extracellular deposits of glycolipids, proteins and cellular debris) that is usually the first step to the onset of the disease (3).

This early form of AMD can progress to more advanced forms which are classified as dry (geographic atrophy) or wet (neovascular) AMD. In wet AMD, a choroidal neovascularization (CNV) is observed, related to phenomena of extravasation and hemorrhages that result in a discoid scarring already in the final forms of the disease (3). Currently this form has 3 therapies based on anti-VEGF treatments and are investigating new therapies with adjuvants to increase the effectiveness of treatments.

The purpose of this research will be to learn in detail this kind of clinical trials and conduct a systematic review and meta-analysis of the different clinical trials with Anti-VEGF in the treatment of wet AMD.

References

1-Francis PJ et al. Haplotypes in the complement factor H (CFH) gene: associations with drusen and advanced age-related macular degeneration.. PLoS One. 2007 Nov 28;2(11):e1197.

2-Friedman DS et al Prevalence of age-related macular degeneration in the United States. Arch Ophthalmol.2004;122(4):564-72.

3-Liu MM et al. Genetic mechanisms and age-related macular degeneration: common variants,

rare variants, copy number variations, epigenetics, and mitochondrial genetics.. Hum Genomics. 2012 Aug 31;6:13.

POSSIBILITY OF PhD

NO

* (PhD grant required)