



**ACADEMIC EXAMS**  
AT THE FACULTY OF MEDICINE OF THE UNIVERSITY OF LISBON  
INSTITUTE OF ADVANCED TRAINING

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**Masters:**

Psychogerontology (1st Edition)

**Name of Student:**

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**Subject of Thesis:**

Implications of Age-related Macular Degeneration on Functional Autonomy

**Date of Defence:**

16/06/2009

**Mark:**

Very Good

**Jury:**

**President:** Professor Manuel Carrageta (FMUL)

**Orientator:** Professor Carlota Saldanha (FMUL)

**Jury Members:** Professor Gorjão Clara (FCMUNL)



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## SUMMARY

**Introduction:** Actually the Age-Related Macular Degeneration (DMI) is the lieder cause of blind, being responsible for one of the biggest problems in public health in the world. In Portugal, there are 300 000 cases of DMI, appearing 3500 of new cases every year. Identifying the major risk factors that promote de development and progression of the DMI, and the assessment of the functionary autonomy in affected individuals is very important to built prevention and detection strategies. Was applied a quantitative descriptive transversal and exploratory type study, with a methodology that can be applied in larger studies.

**Purpose General:** Identify the major risk factors for DMI development and progression. Assessment the functionary vision and functionary autonomy in people with DMI.

**Specific:** To determine the relationship between DMI degree and parameters risk factors of cardiovascular diseases. To verify the relationship between DMI degree and antioxidant capacity in blood plasma.

**Methods:** Were assessed 37 individuals with more 50 years, with DMI diagnostic and with visual acuity reduced. An inquiry was applied, with questions about personal and familiar data's, about alimentary habits, alcohol, caffeine and tobacco consumption, sun exposure and UV protection and about systemic diseases. The functionary vision was determined with ADVS scale, followed by a mental short assesses with MMSE scale. For the functionary autonomy assess, was applied the Barthel scale (for DVA's) and Lawton and Brody scale (for DVIA's). The measure of visual acuity was done in photopic conditions, for far and near vision, with the usual optic correction and written down the type and degree of DMI. The IMC was determining, followed by a 5ml blood harvest (after informed consent) for asses the antioxidant capacity in blood plasma.

**Results:** It was verified that most of the individuals were female, Caucasians, with ages between 74 and 80 years. The most of the individuals had high IMC, were high sun exposure submitted and didn't use UV protection. They didn't had familiar antecedents, had alimentary habits of fruits and vegetables and didn't consumption alcohol, caffeine or tobacco. The most predominant cardiovascular diseases was de arterial hypertension and hypercholesterolemia. The individuals had majority atrophic DMI with high degree and an visual acuity equal or lower than 0,05. The individuals were dependents in basic and instrumental activities and had a very weak functionary vision, particularly for diurnal and nocturnal drive and for lightening tasks. It was confirmed for ( $P < 0,05$ ) by qui-quadrado of independence test, that there is a strong relationship between arterial tension and DMI degree, although it was not confirmed the existence of cholesterol levels and DMI degree, nether antioxidant capacity and DMI degree relationship ( $P < 0,05$ ).

**Conclusions:** The high states of DMI, remitted to a lower functionary vision, conditioning the diurnal and nocturnal drive and for lightening tasks, inducing functionary autonomy loss. Old age, female sex, Caucasian race, high sun exposure, the absence of UV protection, high IMC, arterial hypertension and hypercholesterolemia are potential risk factors for DMI development. The arterial hypertension was revealed to be a risk factor that promotes the progression of high states of the disease, since a strong relationship exists between arterial tension and DMI degree ( $P < 0,05$ ). The hypercholesterolemia and the lipid-soluble and water-soluble antioxidant



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capacity didn't prove themselves to be risk factors capable of developing high stages of the disease.

**Words-key:** DMI, autonomy, hypertension, hypercholesterolemia, antioxidant capacity