

Short Communication

Thyroidopathy and Age-Related Macular Degeneration: Is There Any Correlation?

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What Is It about?

Age-related macular degeneration (AMD) is considered to be the leading cause of irreversible visual loss among the elderly in the industrialized world. The purpose of this case-control study was to evaluate whether inherent sociodemographic parameters (age, gender, marital status, and educational level), lifestyle features (smoking, alcohol consumption, exercise, walking), as well as medical data (hypertension, diabetes mellitus, thyroidopathy, migraine or headaches, cardiovascular diseases, cancer, myoskeletal problems, anxiety/depression) may be potential risk factors for the presence of AMD. Risk factors for AMD were found to be the marital status, the higher educational level, the presence of thyroidopathy, cardiovascular disorders, and anxiety/depression.

Keywords

Age-related macular degeneration · Risk factors · Thyroidopathy

Abstract

Purpose: The purpose of this study was to evaluate whether inherent sociodemographic parameters, lifestyle features, as well as medical data may be potential risk factors for the presence of age-related macular degeneration (AMD). **Methods:** Participants in our study were 114 patients with AMD, 63 males and 51 females, and 100 control subjects without any ocular disease. Demographic data, lifestyle data, medical history, and comorbidities were recorded and analyzed as potential risk factors for the presence of AMD. **Results:** There was no statistically significant difference between patients and controls regarding age, gender, smoking, alcohol consumption, walking, exercise, presence of hypertension, diabetes mellitus, myoskeletal problems, migraine, and cancer. Marital status, higher educational level, cardiovascular disorders, and thyroidopathy were found to be significantly associated with AMD. **Conclusions:** Apart from already reported risk factors for AMD, thyroidopathy was associated with AMD.

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Age-related macular degeneration (AMD) is considered to be the leading cause of irreversible visual loss among the elderly in the industrialized world. Its prevalence ranges from 10% in people aged 65–75 years to 30% among those aged 75 years and older, and it is expected that the number of people with AMD will increase about 1.5 fold within the next 10 years due to an aging population and a higher prevalence of risk factors associated with the disease [1]. The purpose of this study was to evaluate whether inherent sociodemographic parameters, lifestyle features, as well as medical data may be potential risk factors for the presence of AMD.

Participants in our study were 114 patients with AMD, 63 males and 51 females. The patients were recruited at the 2nd Department of Ophthalmology, Ophthalmiatrion Athinon, Athens, Greece. Patients with corneal abnormalities, retinal diseases other than AMD, glaucoma, ocular trauma, retinal detachment, ocular inflammation or infection, and psychiatric diseases were excluded. In addition, 100 healthy controls without AMD or other ocular diseases, adjusted for age and gender, were enrolled in the study. All procedures were in accordance with the tenets of the Declaration of Helsinki and were approved by the Institutional Review Board of Ophthalmiatrion Athinon hospital. Written informed consent was obtained by all patients.

Demographic data (age, gender, marital status, and educational level), lifestyle data (smoking, alcohol consumption, exercise, and walking), medical history, and comorbidities (hypertension, diabetes mellitus, thyroidopathy, migraine or headaches, cardiovascular diseases, cancer, myoskeletal problems, and anxiety/depression) were recorded and analyzed as potential risk factors for the presence of AMD. Statistical analysis was performed using SPSS 22.0 statistical software (SPSS Inc., Chicago, IL, USA). The level of statistical significance was set to 0.05.

The mean age of patients was 76.6 ± 6.1 years (range 62–92), while the mean age of controls was 75.8 ± 6.2 years (range 62–88). There was no statistically significant difference between patients and controls regarding age, gender, smoking, alcohol consumption, walking, exercise, presence of hypertension, diabetes mellitus, myoskeletal problems, migraine, and cancer. A significantly higher percentage of patients with AMD were married compared to controls ($p = 0.030$), while they seemed to have a higher educational level (university) than controls ($p < 0.001$). In addition, there was a statistically significant difference in the presence of thyroidopathy ($p = 0.003$), cardiovascular disorders ($p = 0.027$), and anxiety/depression ($p = 0.037$) between patients and controls.

The finding that higher educational status and marriage were found to be risk factors for AMD could be explained by the fact that usually more educated people and those with a high degree of partnership present a better compliance and seek health care easier than other people. The association between cardiovascular problems or anxiety and AMD has been reported in previous studies as well, although the results remain controversial [2]. However, it should be noted that the association between AMD and thyroidopathy has not been well-studied previously, although a higher percentage of hypothyroidism has been found in AMD patients [3]. Additionally, in a recent prospective study, patients with high FT₄ presented a higher probability of having AMD [4], which is in line with our results. Further studies are needed to confirm this observation and to shed light on the potential involvement of thyroid hormone in the pathogenesis of AMD [5].

In conclusion, risk factors for AMD were found to be marital status, higher educational level, presence of thyroidopathy, cardiovascular disorders, and anxiety/depression.

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