20th International Congress on

Vision Science and Eye

August 29-30, 2018 | Zurich, Switzerland

Prevalence of visual impairment and associated risk factors in patients with diabetes mellitus in Armenia

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Introduction: Diabetes mellitus is one of the most common chronic diseases, which affects many parts of the body, including the eye, leading to visual impairment (VI) and blindness. This study aims to investigate the prevalence of and factors associated with VI and blindness among patients with diabetes in Armenia.

Methods: This analytical cross-sectional study included 449 patients with diabetes mellitus from Tavush province of Armenia. All participants underwent detailed ophthalmic examination in 2016. The presence of eye diseases and blindness was defined based on the WHO International Classification of Diseases. The survey instrument included questions about socio-demographic characteristics, diabetes duration, non-communicable diseases, visual acuity and eye diseases. Descriptive statistics and logistic regression were used to analyze the data.

Results: The mean age of participants was 62.3 (SD = 10.4), ranging from 19 to 86 years. The majority of participants were women (69.2%). The mean duration of diabetes was 6.8 years (SD = 5.33). Hypertension was the most prevalent chronic comorbidity, with 74.7% of the respondents suffering from it. Diabetic retinopathy (DR) was diagnosed in 18.7% of patients, and 3.6% had proliferative DR. The prevalence of refractive errors (myopia, hyperopia, astigmatism and presbyopia) was 78.0%, cataract 51.0%, age-related macular degeneration (AMD) 11.8%, and glaucoma suspect 4.0%. The prevalence of VI (moderate and severe) was 7.6%, and 1.3% of patients were blind. In the adjusted analysis, age, DR, refractive errors and AMD were significantly associated with VI and blindness.

Conclusion: Earlier diagnosis of diabetic retinopathy and other eye disorders can help to control further complications leading to vision loss. Timely eye screenings and treatment in this population could lead to early detection of eye disorders and reduce the incidence of VI and blindness.

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