Risk factor for anxiety and depression in patients with glaucoma
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Purpose: To assess the risk factor for anxiety and depression in patients with glaucoma.

Methods: Anxiety and depression were evaluated in 408 patients with glaucoma using Hospital Anxiety and Depression Scale (HADS) questionnaire, which consists of two subscales, representing anxiety (HADS-A) and depression (HADS-D). The mean age was 66.2 ± 11.8 (mean ± standard deviation) years, ranged from 25 to 89 years. To identify the risk factors for anxiety and depression, stepwise linear regression analysis was carried out with HADS-A and HADS-D subscores as dependent variables and demographic and clinical features as independent variables. Multiple linear regression model was used to confirm the association between the HADS subscores and the identified risk factors, adjusted with or without demographic and clinical variables.

Results: Stepwise linear regression analysis revealed the significantly related factors to be age for HADS-A (Beta = -0.046, p = 0.0007) and HADS-D (Beta = 0.035, p = 0.011) and mean deviation of Humphrey Visual Field Analyzer 30-2 (HFA30-2) in the better eye for HADS-D (Beta = -0.095, p = 0.0026). Other variables such as gender, number of eye-drops, history of glaucoma surgery, and use of beta-blocker eye-drops or oral carbonic anhydrase inhibitor were not significantly associated with HADS. By multiple linear regression analyses, significant relationships were confirmed between age and HADS-A subscore (Beta = -0.046, p = 0.0008 and Beta = -0.043, p = 0.0022, adjusted with and without demographic and clinical variables respectively). Significant relationships were also confirmed between age (Beta = 0.037, p = 0.0077 and Beta = 0.036, p = 0.0076) or mean deviation of HFA30-2 in the better eye (Beta = -0.094, p = 0.0036 and Beta = -0.065, p = 0.0033) and HADS-D subscore.

Conclusion: Younger age was a risk factor for anxiety, and older age and increasing glaucoma severity were risk factors for depression in patients with glaucoma.