Risk factors for disease progression in low-teens normal-tension glaucoma

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BACKGROUND/AIMS: To investigate the risk factors for disease progression of normal-tension glaucoma (NTG) with pretreatment intraocular pressure (IOP) in the low-teens.

METHODS: One-hundred and two (102) eyes of 102 patients with NTG with pretreatment IOP ≤12 mm Hg who had been followed up were included. Thirty-six patients (35.3%) were classified as progressors and 66 (64.7%) as non-progressors. Between the two groups, no significant differences were found in the follow-up periods (8.7±3.4 vs 7.7±3.2 years; p=0.138), baseline VF mean deviation (-4.50±5.65 vs -3.56±4.30 dB; p=0.348) or pretreatment IOP (11.34±1.21 vs 11.17±1.06 mm Hg; p=0.121). The multivariate Cox proportional hazards model indicated that greater diurnal IOP at baseline (HR=1.609; p=0.004), greater fluctuation of diastolic BP (DBP; HR=1.058; p=0.002) and presence of optic disc haemorrhage during follow-up (DH; HR=3.664; p=0.001) were risk factors for glaucoma progression.

CONCLUSION: In the low-teens NTG eyes, 35.3% showed glaucoma progression during the average 8.7 years of follow-up. Fluctuation of DBP and diurnal IOP as well as DH were significantly associated with greater probability of disease progression.

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