There is a trend for the diagnosis of glaucoma to be made at an earlier stage in 2010 compared to 2001 in Oxford, United Kingdom

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Background & Purpose

Treatment of early glaucoma has been shown to reduce glaucoma progression [1]. Therefore, identifying and treating these patients may reduce morbidity secondary to glaucoma. Our aim was to compare disease severity and examination findings in newly diagnosed patients with glaucoma in 2001 and 2010.

Methods

A retrospective study was undertaken of patients referred to a glaucoma case-finding clinic at the Oxford Eye Hospital in 2001 and 2010. Age at presentation, visual acuity, intraocular pressure (IOP), cup:disc ratio and visual field parameters (mean deviation and pattern standard deviation) were reviewed. Data from the most severely affected eye from each patient were analysed.

Data were found to be non-normally distributed, and therefore analysis was done using a Mann-Whitney test. Contingency tables were analysed using a Chi squared test. Statistical analysis was performed using GraphPad prism software (La Jolla, CA, USA).

Results

In 2001, 257 patients were seen of which 49 (19.1%) were diagnosed with glaucoma. In 2010, 895 patients were seen of which 113 (12.6%) were diagnosed with glaucoma. This difference was statistically significant (p=0.0088, Figure1).

Notes of 46 of 49 patients from the 2001 group and 105 of 113 patients in the 2010 group were available for review.

In 2001, 43.5% of patients diagnosed with glaucoma had early disease (mean deviation (MD) less than -6dB), whereas 61.9% of patients diagnosed in 2010 had early disease (p=0.03, Figure 2).

Patients seen in 2001 were older (p=0.047) and presented with a higher intraocular pressure (p=0.026) than patients in 2010. Visual field analysis revealed patients in 2001 presented with a higher MD (p=0.004) and pattern standard deviation (p=0.004) than patients in 2010 (see Table 2).

Conclusions

A greater proportion of patients referred were diagnosed with glaucoma in 2001 versus 2010. More patients seen in 2010 had early glaucoma compared to 2001.

Patients seen in 2001 were older, presented with a higher intraocular pressure and more severe glaucoma on visual field analysis (MD and PSD) than patients in 2010.

These differences are likely to reflect changes in referral patterns that occurred following the introduction of NICE (National Institute for Health and Clinical Excellence) guidelines for glaucoma management in 2009. This appears to have resulted in more patients being referred, with a smaller proportion actually having glaucoma. However, glaucoma is now being diagnosed at an earlier stage than in 2001.

References


The authors declare that they have no conflict of interest