Patterns of glaucoma referrals from the community to hospital eye services in the UK. Description of participants of the GATE study
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Purpose: To describe the characteristics of participants of the GATE study and referral patterns for glaucoma from the community to hospital eye services. The GATE study was designed to assess the diagnostic performance of imaging technologies (Heidelberg Retina Tomograph (HRT-III), scanning laser polarimetry (GDx-ECC) and Optical Coherence Tomography (Spectralis SD-OCT)) as potential triage tests for patients referred to hospital eye services.

Methods: A within-patient multi-centre comparative study of the diagnostic performance of automated imaging technologies as triage tests was conducted. Adults referred from community optometrists or general practitioners to hospital eye services with any glaucoma-related findings, including those with ocular hypertension (OHT), were included. Five units across the UK of different size and characteristics were involved (Aberdeen, Hinchingbrooke, London-Moorfields, Liverpool and Bedford). Enrolled patients underwent imaging with the three technologies in random order. The diagnosis reference consisted of examination of anterior segment and fundus biomicroscopy, Goldmann intraocular pressure (IOP), and interpretation of visual field test (Humphrey 24-2 SITA) by a senior ophthalmologist with glaucoma expertise.

Results: In total 955 newly referred patients were enrolled between April 2011 and July 2013. Mean age (SD) was 61 (14) and 51% were female. 89% were of white British origin. Mean IOP on referral (both eyes) was 20 mmHg; 25% of referral IOP was measured using GAT. Visual field measures were reliable in 77% of cases. 17% of referred patients were diagnosed with glaucoma and 38% of referred patients were discharged after the first visit. OHT was present in 12% and 26% were glaucoma suspects. PAC and PAC suspect were 3% and 9%. Among those with glaucoma, disease severity in the worst eye was mild in 52%, moderate in 30% and severe in 18%.

Conclusions: Participants of GATE study probably represent current referral patterns from the community to hospital eye services for glaucoma in the UK. A substantial proportion of individuals (over 1/3) were discharged after the first visit. An efficient model of managing referrals for glaucoma is warranted.