

Sir,
General practitioner with special interest improves the efficiency of glaucoma referrals

The prevalence and insidious nature of glaucoma necessitates screening and appropriate referral. In the UK, most referrals for glaucoma are initiated by optometrists.¹ Even with agreed screening guidelines and referral criteria, there is a high false positive rate.²⁻⁷ This may be different, however, for specially trained optometrists.⁸ General practitioners with special interests (GPwSI)⁹ have the necessary knowledge and skills to deliver a certain level of care in the community that may make hospital referrals more efficient. We present the results of a review highlighting the role of a GPwSI in improving the efficiency of glaucoma referrals.

Report

We reviewed the records 52 patients, average age, 68.4 years, referred for suspected glaucoma between 1999 and 2001 by the local GPwSI. Referral was based on the results of applanation tonometry (Goldmann), Humphrey's visual fields and stereoscopic disc assessment. Only patients seen by the glaucoma specialist were included. The mean intraocular pressure was 19.20 mmHg compared to 21.31 mmHg by the GPwSI. In total, 31 patients (59.6%) were assessed as having visual field defects by the glaucoma specialist as well as the GPwSI. A total of 20 (38.5%) patients were assessed as having glaucomatous discs compared to 16 (30.8%) by the GPwSI. In total, 15 patients (28.8%) were assessed as having normal discs and nine (17.3%) as having suspicious discs compared to 20 (38.5%) and 11(21.2%), respectively, by the GPwSI. Of the 52 patients referred, only two patients (3.8%) were discharged by the glaucoma specialist from hospital follow-up. The overall positive predictive value calculated for appropriate glaucoma referral based on intraocular pressure, visual field defects, glaucomatous, and suspicious optic discs was 0.96.

Comments

Detection of glaucoma using intraocular pressure, visual field testing, and optic disc evaluation in combination gives the highest specificity and sensitivity values for screening.^{10,11} General optometrists may be referring an estimated 10 000 patients inappropriately each year in England and Wales.¹⁰ Henson *et al*⁸ showed a reduction in the false positive rate using specially trained optometrists with an associated cost saving per patient passing through their scheme. A PPV of 0.96 could therefore translate into significant savings. The result of our review shows that the GPwSI can provide the refinement necessary to improve the efficiency of glaucoma referrals.

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References

- 1 Bell RWD, O'Brien C. Accuracy of referral to a glaucoma clinic. *Ophthalmic Physiol Opt* 1997; **17**: 7-11.
- 2 Tuck MW, Crick RP. Efficiency of referral for suspected glaucoma. *BMJ* 1991; **302**: 998-1000.
- 3 Vernon SA. The changing pattern of glaucoma referrals by optometrists. *Eye* 1998; **12**: 854-857.
- 4 Harrison RJ, Wild JM, Hopley AJ. Referral patterns to an ophthalmic out-patients clinic by general practitioners and ophthalmic opticians and the role of these professionals in screening for ocular disease. *BMJ* 1988; **297**: 1162-1167.
- 5 Theodossaides J, Murdoch L. Positive predictive value of optometrist-initiated referrals for glaucoma. *Ophthalm Physiol Opt* 1999; **19**: 62-67.
- 6 Bell RWD, O'Brien C. The diagnostic outcome of new glaucoma referrals. *Ophthalm Physiol Opt* 1997; **17**: 3-6.
- 7 Vernon SA, Ghosh G. Do locally agreed guidelines for optometrists concerning the referral of glaucoma suspects influence referral practice? *Eye* 2001; **15**: 458-463.
- 8 Henson DB, Spencer AF, Harper R, Cadman EJ. Community refinement of glaucoma referrals. *Eye* 2003; **17**: 21-26.
- 9 Gerada C, Wright N, Keen J. General practitioners with a special interest: new opportunities or the end of the general practitioner? *Br J Gen Pract* 2002; **52**: 796-797.
- 10 Crick RP, Tuck MW. How can we improve the detection of glaucoma? *BMJ* 1995; **310**: 546-547.
- 11 Harper R, Reeves B. Screening for primary open-angle glaucoma: a review. *Ophthalm Physiol Opt* 1995; **15**(Supp 2): S27-S34.

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