

## References

1. Newman DK, Anwar S, Jordan K. Glaucoma screening by optometrists: positive predictive value of visual field testing. *Eye* 1998;12:921-4.
2. Theodossiaides J, Murdoch I. Positive predictive value of optometrist-initiated referrals for glaucoma. *Ophthalmol Physiol Opt* 1999;19:62-7.
3. Vernon SA, Henry DJ, Cater L, Jones SJ. Screening for glaucoma in the community by non-ophthalmologically trained staff using semi-automated equipment. *Eye* 1990;4:89-97.

Nicholas J. Rumney, MScOptom, FCOptom, FAAO ✉  
Marbury House  
38 St Owen Street  
Hereford HR1 2PR, UK

David B. Henson, PhD  
Department of Ophthalmology  
University of Manchester  
Manchester, UK

Sir,

We thank Rumney & Henson for their comments on our paper.<sup>1</sup> They have nicely illustrated the difficulties of screening for a condition with low prevalence, such as glaucoma. The purpose of our paper, however, was to investigate the positive predictive value (PPV) of visual field testing by optometrists rather than the overall PPV of glaucoma screening. Perimetry is increasingly being used by optometrists as a screening test for glaucoma.

Glaucoma suspects referred with isolated field loss were identified as an increasing source of false positive referrals. The proportion of such referrals was considerably greater in our study (12%) compared with previous surveys (around 1%).<sup>2,3</sup> While the overall PPV for glaucoma (43%) was similar to previous reports,<sup>2,3</sup> patients referred with isolated field loss had a much lower PPV for glaucoma than any other referral group. Most of these false positive referrals resulted from inappropriate visual field testing by optometrists.

Any screening test should be performed in accordance with validated screening methodology. For perimetry, this means selective screening of a population at increased risk of glaucoma and repeating abnormal perimetry (in the absence of other features of glaucoma) to confirm genuine field loss before referral.<sup>4</sup> Our study suggests that current visual field testing by optometrists is leading to unnecessary false positive referrals because such principles are not always observed. False positive referrals have obvious

resource implications for the hospital eye service, but may also have adverse effects for the individual.<sup>5</sup>

Finally, we would certainly endorse the recommendation that optometrists and ophthalmologists need to work closely together in order to achieve acceptable positive (and negative) predictive values for glaucoma screening. Regular quality control should be an integral component of any screening programme. Optometrists will only be able to monitor their glaucoma screening practice if they receive routine feedback on referrals. This is perhaps one area where inter-professional communications could be improved.

## References

1. Newman DK, Anwar S, Jordan K. Glaucoma screening by optometrists: positive predictive value of visual field testing. *Eye* 1998;12:921-4.
2. Tuck MW, Crick RP. Efficiency of referral for suspected glaucoma. *BMJ* 1991;302:998-1000.
3. Sheldrick JH, Ng C, Austin DJ, Rosenthal AR. An analysis of referral routes and diagnostic accuracy in cases of suspected glaucoma. *Ophthalmic Epidemiol* 1994;1:31-9.
4. Katz J, Tielsch JM, Quigley HA, Javitt J, Witt K, Sommer A. Automated suprathreshold screening for glaucoma: the Baltimore Eye Survey. *Invest Ophthalmol Vis Sci* 1993;34:3271-7.
5. Stewart-Brown S, Farmer A. Screening could seriously damage your health. *BMJ* 1997;314:533-4.

D.K. Newman ✉  
S. Anwar  
K. Jordan  
Department of Ophthalmology  
West Suffolk Hospital  
Hardwick Lane  
Bury St Edmunds  
Suffolk IP33 2QZ, UK

Sir,

In their case report on post-operative myopic shift due to intracapsular Healon, Reck *et al.*<sup>1</sup> describe the condition as 'rare'. My own experience, presented below, may indicate otherwise.

During a 17 month period I saw 19 cases of capsular distension syndrome (CDS). All followed uncomplicated phacoemulsification surgery via clear corneal incisions, with neat capsulorhexis edges well apposed to acrylic intraocular lenses (IOLs). All 13 cases that occurred on the first post-operative day were associated with 1.50 D to 3.00 D of myopia, and all of these except one resolved within 2 weeks, with resolution of the myopia. Six cases

were noted later after surgery, between 4 and 22 months post-operatively. Four of these required YAG laser capsulotomy for gross cellular proliferation, of which 2 lost 1.00 D to 1.25 D of myopia following the procedure.

In all cases an Acrygel (acrylic) IOL was used. In the first 5 cases Healon GV was used; in the remainder, Viscoat. In all but the first three cases, viscoelastic was almost entirely removed by performing irrigation/aspiration between the IOL and the posterior capsule. The subsequent gross distension of the capsular bag would suggest that fluid had been drawn into the closed space of the bag, formed by the tight apposition of the anterior capsular ring with the IOL. This would support Holtz's<sup>2</sup> theory of an osmotic gradient due to small quantities of retained viscoelastic. During the period of surgery of these cases, other surgeons at the same hospital using the same materials and similar techniques did not experience CDS, and the incidence in my hands was 2.5%. However, since that period I have changed both my IOL and viscoelastic of choice, and I have not seen any further cases.

CDS may be more prevalent than is currently recognised. Six cases were reported in 1990,<sup>3</sup> 7 in 1992,<sup>2</sup> and single cases in 1996<sup>4</sup> and 1998.<sup>5</sup> It is likely that the condition is under-diagnosed, especially if most cases resolve spontaneously a few days after surgery. CDS should be suspected in any case of unexplained post-operative myopia.

## References

1. Reck AC, Pathmanathan T, Butler RE. Post-operative myopic shift due to trapped intracapsular Healon. *Eye* 1998;12:900-1.
2. Holtz SJ. Postoperative capsular bag distension. *J Cataract Refract Surg* 1992;18:310-7.
3. Davison JA. Capsular bag distension after endophacoemulsification and posterior chamber intraocular lens implantation. *J Cataract Refract Surg* 1990;16:99-108.
4. Maxwell WA. Capsular bag distension with posterior chamber intraocular lenses. *Phaco & Foldables (Alcon Surgical)* 1996;9(2).
5. Nishi O, Nishi K, Takahashi E. Capsular bag distension syndrome noted 5 years after intraocular lens implantation. *Am J Ophthalmol* 1998;125:545-7.

Robert Murray, FRCS, FRCOphth ✉  
Borders General Hospital  
Melrose  
Roxburghshire TD6 9BS, UK  
Tel: +44 (0)1896 754333, ext 1033  
Fax: +44 (0)1896 823476