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Sir,
The proview phosphene tonometer: a clinical evaluation

We enjoyed reading the article by Chew *et al.*¹ There are several issues that we think the authors may like to address.

It would be helpful for the authors to clarify whether they employed the median of several intraocular pressure (IOP) readings for analysis. All measurements of IOP are subject to random errors. Single measurement is suboptimal in reflecting the true IOP. Taking the median of several readings is a standard way to approximate the true IOP values for most tonometry. Comparison of single measurement may introduce more error into the mean difference.

The authors did not describe the visual field status of their subjects. Theoretically, a proper perception of pressure phosphene requires the presence of functioning bipolar cells, rods, and cones in the retina.² If the recruited subjects were having advanced glaucoma or significant retinal disease such that there was a significant bipolar cells and visual field loss, the perception of phosphene may prove difficult. However, this does not necessarily negate the potential use of the pressure phosphene tonometer (PPT) in those with early or preperimetric glaucoma.

The authors talked of testing for reliability of PPT in their aim of study, and concluded that PPT cannot be a reliable instrument. However, the authors have only tested for accuracy of PPT *vs* Goldmann tonometer (GT), not reliability, as they did not present data such as coefficients of variations, which is a proper way to assess reliability.

It is uncertain whether suboptimal hand–eye coordination, intelligence, and patient understanding will have significant influence on the accuracy in using PPT. The recruited subjects in this study consisted of an elderly population (median age = 73 years), which might have been suboptimal with regard to the factors listed above. The authors may like to give an analysis on the group with younger age, to see whether PPT might be more useful.

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Sir,
Reply to DYL Leung and DSC Lam

Thank you for the opportunity to respond to the issues raised in the letter by Leung and Lam and we are grateful to them for their interest and enquiry.

A single reading with both the pressure phosphene tonometer (PPT) and the Goldmann tonometer (GT) was

used for two reasons. Firstly, this was considered a closer simulation of what was likely to occur in a clinical environment and secondly the risk of consequent reduction of intraocular pressure due to repeated indentations was reduced.

Leung and Lam make a very good point about the subjects' visual field status. Their visual field status was not described as the subjects were all patients sourced from a general ophthalmology clinic and could be assumed to have no or minimal visual field loss. However, those patients for whom the PPT is intended are more likely to have glaucomatous field loss.

As a result of the wide limits of agreement there seemed to be little merit in doing tests of reliability on these data. Furthermore, it needs to be noted that 31% of the subjects were unable to have their intraocular pressures measured using the PPT as they were unable to perceive a pressure phosphene.

When the data were analysed for those younger than the median *vs* those older, the difference between the tests and the limits of agreement were similar for the two age groups.

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Sir,
Endophthalmitis following 25-gauge vitrectomy

Postoperative endophthalmitis remains a rare, albeit serious, complication of ophthalmic surgery, with an incidence of approximately 0.1%.^{1,2} It is acknowledged to be less common following vitrectomy than other intraocular surgery and the incidence of endophthalmitis following conventional 20-gauge vitrectomy has been reported as 0.07% by Cohen *et al.*³ in their 10-year survey published in 1995.

The 25-gauge transconjunctival sutureless vitrectomy (TSV) system is a relatively recent innovation^{4,5} that may

have several advantages over traditional vitrectomy surgery. We present what we believe to be the first reported case of endophthalmitis following 25-gauge vitrectomy.

Case report

In October 2003, an 81-year-old pseudophakic gentleman underwent a routine 25-gauge transconjunctival sutureless vitrectomy of his right eye at Moorfields Eye Hospital, London, after persistently complaining of floaters. He had no predisposing ocular or systemic risk factors for endophthalmitis. Aqueous povidine-iodine 5% was applied pre-operatively and 125 mg cefuroxime was injected subconjunctivally at the end of the procedure. G. chloramphenicol 0.5% qid and G. dexamethasone 0.1% qid were prescribed postoperatively.

At 1-day postoperatively, ocular examination revealed minimal inflammation and an intraocular pressure of 10 mm Hg. At day 7, his visual acuity was 6/6 and the intraocular pressure had stabilised at 14 mmHg. He was noted to have increased anterior chamber activity and the frequency of his topical G. dexamethasone 0.1% was increased. The sclerostomies appeared to be healing well at both visits.

He returned the next day with hand movements vision, although the eye remained pain-free. There was a marked anterior uveitis with the presence of a small hypopyon as well as fibrin deposition on the intraocular lens; the vitreous was also markedly cellular and provided a poor view of the retina. B-scan ultrasound demonstrated only dispersed vitreous opacities.

A clinical diagnosis of bacterial endophthalmitis was made and he underwent an anterior chamber and vitreous tap followed by standard first-line treatment with intravitreal vancomycin 0.1 mg in 0.1 ml and amikacin 0.4 mg in 0.1 ml. He also commenced a 7-day course of ciprofloxacin 750 mg p.o. b.d. and a 4-week tapering course of prednisolone at a starting dose of 60 mg p.o. o.d. Initial microscopy and gram stain of the taps revealed no organisms.

The clinical picture improved greatly within 3 days with resolution of the hypopyon and much of the anterior chamber activity. Visual acuity improved to 6/12 within 1 week and 6/6 within 3 weeks. It remained 6/6 and the eye quiet at his most recent review, 3 months postoperatively.

Microbiological examination of the anterior chamber and vitreous specimens revealed no bacterial or fungal isolates at 14-days incubation.

Discussion

We believe that this case represents the first reported case of endophthalmitis following 25-gauge vitrectomy