

Sir,
Reply to Smith *et al*

We have read with interest the comments provided by Smith relating to our study. We appreciate his remarks and his interest in our article.

As required by the author, we will explain the reason why our results differ from previous literature on the rate of postoperative vitreous cavity haemorrhage (POVCH).

In the quoted paper by Yang *et al*, preoperative bevacizumab (1.25 mg/0.05 ml) was combined with C3F8 10%.¹ This gas is a long-acting gas with haemostatic effect, which could explain the absence of early POVCH. In our series, we did not use any gas at the end of the surgery.

Our results also differ from those reported by Yeoh *et al* by way of substantial differences in the study settings.² First, our inclusion criteria were presence of vitreous haemorrhage (VH) with active proliferative diabetic retinopathy, whereas their inclusion criteria were tractional retinal detachment (TRD) involving the macula with active neovascularization, rubeosis with VH and high-risk features for developing rubeosis. Second, all 31 eyes in our study were filled with air, in contrast with only 1 of the 10 eyes in their study (the other nine being filled with SF6 or water).

In our study, the amount of VH was graded using slit-lamp biomicroscopy from grade 0 to grade 3. This allows a better understanding of the severity of POVCH. Looking carefully at our results, it may be inferred that we reported the presence of a low grade of VH (grade 1: mild VH, fundal details possible/hazy view) only within the first week after the surgery, whereas grade 3 VH (severe recurrent VH with no fundus details) was present only in 3, 3, 6, and 6% of the eyes at 7 days, 1-, 3-, and 6-month follow-up, respectively.

The author has asked for clarification on the surgical technique.

The fluid-air exchange was performed at the end of the surgical procedure, whereas gas tamponade or silicon oil was never used. In our series, 28 out of 31 patients (90%) had already undergone panretinal photocoagulation earlier. The endolaser photocoagulation was carefully completed in all eyes during the surgery.

We did not find any toxic effect of IVB (2.5 mg/0.1 ml). The only adverse event was one single case of TRD that developed during the follow-up period.

In our opinion, the IVB injected at the end of the surgery does not have any effect on late re-bleeding, the main reasons for recurrent VH being intraoperative surgical manoeuvres, insufficient haemostasis, and persistent retinal neovascularizations.

Our hypothesis is that preoperative bevacizumab injection facilitates surgery by enabling a complete endolaser photocoagulation treatment, reducing intraoperative haemorrhage, and avoiding the need for a complicated manoeuvre to achieve total delamination of the fibrovascular tissue, thereby minimizing the risk of recurrent vitreous haemorrhage.

Conflict of interest

The authors declare no conflict of interest.

References

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- 2 Yeoh J, Williams C, Allen P, Buttery R, Chiu D, Clark B *et al*. Avastin as an adjunct to vitrectomy in the management of severe proliferative diabetic retinopathy: a prospective case series. *Clin Experiment Ophthalmol* 2008; **36**: 449–454.

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Sir,
Risk stratification for posterior capsule rupture and vitreous loss during cataract surgery

Phacoemulsification is the commonest procedure, with over 325 471 surgeries being performed in the NHS.¹ Identifying and stratifying the pre-operative risk for cataract surgery is probably more relevant now than before. This is especially so because of the relative reduction in ophthalmic training years and the adverse case mix because of case selection by local independent cataract treatment centres. In this context, the recent publication by Narendran *et al*² in *Eye* provides us all with important and germane information.

The main risk indicators identified were increasing age (adjusted odds ratio (OR) = 2.37), brunescence or white cataract (adjusted OR = 2.99), pseudoexfoliation/phacodonesis (adjusted OR = 2.92), small pupil size (adjusted OR = 1.45), axial length > 26 mm (adjusted OR = 1.47), and trainee status (for SHO, adjusted OR = 3.73). It is inevitable that there are further factors that may be important, such as shallow anterior chamber depth (ACD).

Analysis of our Medisoft cataract database (Leeds, UK) showed that 8891 eyes had ACD data (from June 2004 to October 2008). In all, 1138 of these eyes had an ACD ≤ 2.5 mm and 7753 had an ACD > 2.5 mm. PCR ± vitreous loss was seen in 23 (2.0%) of the eyes with an ACD ≤ 2.5 mm compared with 95 (1.2%) in the > 2.5 mm ACD group (OR = 1.66, *P* = 0.04, 95% CI = 1.05–2.63), with an overall twofold risk. After correction for covariates such as cataract brunescence, pseudoexfoliation, and small pupil, the adjusted OR was 1.56 (*P* = 0.056, 95% CI = 0.98–2.49).

Our sample is clearly too small to give more than an indication, and it would be helpful to know from the authors if they have any similar data.

A reduced ACD of less than 2.5 mm has also been previously associated with increased intra-operative complications in patients with pseudoexfoliation.³ Considering ACD may be helpful in risk stratification

for cataract surgery and can help us to further improve our outcomes.

References

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- 3 Kuchle M, Viestenz A, Martus P, Handel A, Junemann A, Naumann GO. Anterior chamber depth and complications during cataract surgery in eyes with pseudoexfoliation syndrome. *Am J Ophthalmol* 2000; **129**: 281–285.

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Sir,
Responding letter

This article has highlighted and quantified another important risk factor for posterior capsular rupture (PCR) that was not analysed as a part of our series of 55 567 cases as ACD is not currently a part of the Cataract National Dataset. Adding this variable to the risk stratification model would undoubtedly improve its predictive value and we will therefore include it in the future rounds of multi-centre data collection. I also intend to incorporate the risk stratification model within the Medisoft electronic medical record so that clinicians can have access to an accurate estimate of the risk of PCR when planning surgery.

Conflict of interest

The author is the Medical Director of Medisoft Limited.

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Sir,
The Cataract National Dataset

We congratulate Narendran *et al*¹ on their study of the risk factors for posterior capsule rupture (PCR) and/or vitreous loss (VL), using data from the Medisoft electronic patient record (EPR). The multicentre analysis includes data from our own unit, and findings are broadly in line with our clinical experience. The authors state that ‘completeness of these (EPR) records is detailed and unusually high’, although there was no attempt to quantify the accuracy of clinical data. If these data are inaccurate, then the assessment of risk may also be inaccurate.

We attempted to quantify the accuracy of data entry for ‘ocular risk factors’ by sending an anonymous questionnaire to ophthalmologists in our unit. We asked whether, when recording a cataract operation on Medisoft, risk factors were recorded ‘always’, ‘sometimes’, ‘never’, or ‘only if complications occurred’. The response rate was 55% (11/20). One respondent did not use Medisoft; thus 10 responses were analysed.

Only one respondent (10%) stated that they ‘always’ entered all data on risk factors, although no respondent ‘never’ entered any of these data. One respondent admitted to only recording certain risk factors if a complication occurred. Recording rates were different for each risk factor (Table 1).

This small pilot study does indicate a significant degree of under-reporting of ocular conditions, by ophthalmologists who use Medisoft. The fact that some will record a risk factor ‘only if a complication occurs’ is a

Table 1 Recording rates for different risk factors

Risk factor	Glaucoma	Diabetic retinopathy	Brunescent/white cataract	Vitreous opacities/No fundal view	Pseudo-exfoliation/phacodonesis	Small pupil	Medium pupil
Proportion of respondents who ‘always’ record this risk factor, when present	6/10	7/10	3/10	5/10	3/10	1/10	1/10
Proportion of respondents who ‘never’ record this risk factor, when present	1/10	0/10	3/10	2/10	2/10	3/10	4/10
Proportion of respondents who record this risk factor, when present, ‘only if there is a complication’	0/10	0/10	0/10	0/10	0/10	1/10	1/10
Overall proportion of respondents that record risk factor ^a	77.5%	90.5%	49.5%	64.5%	58.5%	40.5%	31.5%

^aThis is the sum of ‘always’ and ‘sometimes’.