Sir,
Reply to Dr Grzybowski

We thank Dr Grzybowski for his interest in our manuscript. His comments¹ are consistent with those that we mentioned in the paper: 'a significant increase in the antibiotic resistance of the isolated specimens from ocular flora' and 'a greater rate of endophthalmitis with the use of topical antibiotics'.² As we stated in our manuscript, we reviewed the articles that have been published in the literature from January 2005 to November 2012.²

After our manuscript was in press, several reports, including those discussed by Dr Grzybowski, were published describing the use of antibiotics in intravitreal injections. Although high-quality prospective randomized clinical trials comparing the rate of post-injection endophthalmitis have not been conducted, there is a growing body of evidence that shows that the routine use of antibiotics before or after intravitreal injections should be discouraged.^{3–5}

It is noteworthy that the use of pre- and/or post-injection antibiotics may still be considered in selected conditions such as eyes with external ocular diseases, nasolacrimal drainage problems, or history of endophthalmitis, as well as monocular patients.

Once again we thank Dr Grzybowski for his comments, which have allowed us the opportunity to respond.

Conflict of interest

The authors declare no conflict of interest.

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KG Falavarjani¹ and QD Nguyen²

¹Eye Research Center, Iran University of Medical Sciences, Tehran, Iran

²Stanley M. Truhlsen Eye Institute, University of Nebraska Medical Center, Omaha, NE, USA
E-mail: drghasemi@yahoo.com

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Sir,
Myopic macular retinoschisis with microvascular anomalies

Myopic macular retinoschisis is found in eyes with pathological myopia. It is a precursor to both myopic macular holes and rhegmatogenous retinal detachment.^{1–3} This report describes a novel vascular finding in this setting, which offers support to the theory that paravascular anomalies contribute to the pathogenesis of this condition.

Case report

A 45-year-old ethnic-Chinese lady presented with central visual disturbance in the right eye. Her corrected acuity was 6/9 in both eyes and the refraction was –8.0 dioptres in the right eye and –10.0 dioptres in the left eye. The anterior segments were normal in both eyes. Fundoscopy of the right eye revealed fine radial striae at the fovea and subtle cystic spaces. Temporal to the macula there were a number of saccular aneurysm-like structures and a 200° wide-field image of the retina demonstrated that there was no peripheral retinoschisis. (Figure 1) A fluorescein angiogram highlighted these lesions, together with disrupted retinal capillaries. No leakage was demonstrated. (Figure 2) Optical coherence tomography (OCT) confirmed the presence of macular retinoschisis in the right eye (Figure 3).

Comment

The OCT features of this syndrome can be varied but typically include: columnar bridging structures within the schisis cavity, and a variable degree of vitreo-retinal traction including ILM dehiscence.^{1,4} Both of these findings were present in our patient.

Recently, OCT imaging has demonstrated that the contour of larger retinal vessels may also be altered in patients with myopic macular retinoschisis, but to date disruption of the retinal microcirculation has not been described.⁵ In our patient the blood filled spaces appeared to be dilated capillary terminals and not extravasated blood. This suggests

Figure 1 (a) Colour fundus photograph of the right eye demonstrating features of high myopia, abnormal radial foveal striations, and saccular aneurysm-like changes in the temporal macula (black arrow). (b) This wide-field pseudocolour photograph of the right retina demonstrates that there was no peripheral retinoschisis.

that the vascular anastomoses connecting the superficial and deep retinal capillary networks were physically disrupted as the schisis cavity enlarged. The absence of fluorescein leakage at the vessel terminals together with the increased calibre of the adjacent arterioles and capillaries might further suggest that there was sufficient time for capillary remodelling to occur as the inner and outer retinal leafs separated. Conversely, if the dehiscence progressed more rapidly the risk of bleeding within the schisis cavity would be increased.

This case represents a novel vascular finding in the setting of myopic macular retinoschisis, which may lend support to the theory that paravascular anomalies contribute to the pathogenesis of this condition.

Figure 2 Early venous, transit phase fluorescein angiogram of the right eye demonstrating the abnormal saccular aneurysm-like dilatations in the retinal capillaries of the right temporal macula (black arrow).

Figure 3 Spectral domain optical coherence tomography (OCT) of the right macula demonstrating the vertical inter-bridging strands and cystic degeneration of the outer retina typical of myopic retinoschisis.

Conflict of interest

The authors declare no conflict of interest.

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SR Durkin and PJ Polkinghorne

Department of Ophthalmology, the University of
Auckland, Auckland, New Zealand
E-mail: Philip@pjpolk.co.nz

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**Sir,
The development of a virtual reality training
programme for ophthalmology: study must take
into account visual acuity and stereopsis**

We read with interest the important study undertaken by Saleh *et al*.¹

However, the only exclusion criterion for selection of candidates was novices with more than 2 h of simulation/intraocular surgical experience. The authors do not mention whether a baseline test of visual acuity and stereopsis was recorded for participants. The importance of stereopsis in achieving satisfactory skills in ophthalmic surgery remains debated.² Recent studies have demonstrated that a decreased stereoacuity results in a statistically significant decrease in simulated surgical performance for most participants.^{3,4} We suggest that all ophthalmic simulator-based studies should measure participant visual acuity and stereoacuity to ensure reliable results.

The authors also discuss the emergence of a 'learning curve' achieved in repeated tasks. In our simulator-based studies evaluating parameters affecting surgeon performance, we minimised the learning curve before data collection.⁵ Using one attempt level 1, one attempt level 2 and six attempts level 4 forceps module, stabilised scores for our participants. Applying the same methodology to other modules might produce similar results and could be used in training.

Conflict of interest

The authors declare no conflict of interest.

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AJ Swampillai¹, S Waqar¹, JC Park¹, N Modi¹, TL Kersey²
and TJ Sleep¹

¹Torbay General Hospital, South Devon Foundation
NHS Trust, Torquay, UK

²Frimley Park NHS Foundation Trust, Frimley, UK
E-mail: tamsin.sleep@nhs.net

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**Sir,
Response to Swampillai *et al***

We thank Dr Swampillai *et al* for their correspondence¹ regarding our article.² In our study, the main inclusion criterion was ophthalmic trainees with minimal surgical experience² (as defined in the paper). No other essential or desirable criteria from the ophthalmology training selection process were tested as trainees recruited had already passed through all this process. As Swampillai *et al* rightly pointed out, the importance of stereopsis in achieving satisfactory skill in ophthalmic surgery still remains debated.³ There are various gradations of stereopsis impairment, and until a clear relationship between these and surgical skills performance is defined their influence on data can only be speculated. There is also a range of other potential extraneous factors that could potentially influence surgical performance, some described, for example, sleep deprivation,⁴ and likely many more that have not been examined formally. It was for this combination of reasons that during the study, outset inclusion and exclusion criteria were defined as they were.

Defining the surgical learning curves will become central as the use of simulators broadens. We thank Swampillai *et al* for highlighting their observation and pretraining description. Importantly, our study showed that there were statistically significant differences in the results between the different tasks, thus the learning curves are likely to vary significantly depending on the task selection. Without more detailed quantitative analysis of how the simulator scores vary during this pre-training process, along with its effects thereafter,