

Sir,
Reply to Dr Taub

We would like to thank Dr Taub¹ for his interest in our correspondence.² In response, we would like to address two issues that he has raised.

Firstly, when an 'accident' occurs as a result of a recommended therapy or intervention, this is termed a complication. All therapies have potential complications and need to be considered on the basis of their risk and benefit profile. If patients are encouraged to repeatedly hit homemade pendulums at eye level, ocular trauma is a complication that deserves consideration. Any equipment used in such exercises should be designed to be as safe as possible to minimize the risk of ocular injury. In light of this case, the particular behavioural optometrist involved is going to modify the construction of the equipment used for this exercise.

Secondly, Dr Taub implies that we intended this case report to somehow represent adequate reason to 'strike out at all of behavioural optometry'. It is not. Arguments regarding efficacy are discussed in thorough literature reviews performed by other authors.^{3,4}

References

- 1 Taub MB. This is a letter to the editor. *Eye* 2013; **27**(3): 454.
- 2 Drury B, Imrie F. An unexpected complication of behavioural vision therapy. *Eye* 2012; **26**: 1495.
- 3 Barrett B. A critical evaluation of the evidence supporting the practice of behavioural vision therapy. *Ophthalmic Physiol Opt* 2009; **29**: 4–25.
- 4 Jennings J. Behavioural optometry -a critical review. *Optom Pract* 2000; **1**: 67–78.

B Drury and F Imrie

Department of Ophthalmology, Gold Coast Hospital,
Southport, QLD, Australia
E-mail: brett.drury1@gmail.com

Eye (2013) **27**, 455; doi:10.1038/eye.2012.272;
published online 18 January 2013

Sir,
Comment on 'Reduction of thickness of ganglion cell complex after internal limiting membrane peeling during vitrectomy for idiopathic macular hole'

We read with interest the article on 'Reduction of thickness of ganglion cell complex after internal limiting membrane peeling during vitrectomy for idiopathic macular hole' by Baba *et al.*¹

In the discussion regarding the possible mechanisms of ganglion cell complex (GCC) thickness reduction, it is noteworthy to include that indocyanine green (ICG) can cause the alteration in the surgical planes during internal limiting membrane (ILM) peeling in macular hole (MH) surgery. In a study by Gandorfer *et al.*,² all membrane

specimens from ILM peel revealed not only the ILM, but also some small amounts of retinal elements, such as the plasma membrane of Müller cells and other undetermined structures. This indicates a cleavage plane not exactly at the outer undulating aspect of the ILM but within the outermost retinal layers, which would account for the thinning of the GCC layer.

The conclusion by the authors in this study is controversial. ILM peel may improve the success of anatomical closure of a MH. Macular hole surgery, with or without the use of adjuncts, had high success rates prior to the recently accepted practice of ILM peeling. It is our understanding that many centres do not perform an ILM peel routinely for certain stages of MH and despite this, achieve high rates of anatomical closure. Smiddy *et al.*³ reported a high anatomic MH closure rate of 93% with a complete, partial or no ILM peel. Brooks Jr⁴ reported 82% primary anatomical closure of MH without ILM peel. ILM peel is not essential for MH <300 µm and <6 months in duration, and its value in other stages of macular hole is still not proven, though widely accepted. We suggest that, ILM peel may aid in MH closure but is not essential as the authors concluded in their study.

Conflict of interest

The authors declare no conflict of interest.

References

- 1 Baba T, Yamamoto S, Kimoto R, Oshitari T, Sato E. Reduction of thickness of ganglion cell complex after internal limiting membrane peeling during vitrectomy for idiopathic macular hole. *Eye* 2012; **26**(9): 1173–1180.
- 2 Gandorfer A, Haritoglou C, Gass CA, Ulbig MW, Kampik A. Indocyanine green-assisted peeling of the internal limiting membrane may cause retinal damage. *Am J Ophthalmol* 2001; **132**: 431–433.
- 3 Smiddy WE, Feuer W, Cordahi G. Internal limiting membrane peeling in macular hole surgery. *Ophthalmology* 2001; **108**(8): 1471–1476.
- 4 Brooks Jr, HL. Macular hole surgery with and without internal limiting membrane peeling. *Ophthalmology* 2000; **107**(10): 1939–1949.

TK Soong and N Saha

Department of Ophthalmology, Flinders Medical
Centre, Bedford Park, SA 5042, Australia
E-mail: terrenceoong@yahoo.com

Eye (2013) **27**, 455; doi:10.1038/eye.2012.305;
published online 18 January 2013

Sir,
Reply to Dr Soong and Mr Saha

We appreciate the comments of Dr Soong and Mr Saha¹ concerning our article.² We reported a thinning of the ganglion cell complex (GCC) and a significant correlation between the thickness of GCC and retinal sensitivity

measured by microperimetry after internal limiting membrane (ILM) peeling in eyes with an idiopathic macular hole (MH). We reported that the thinning of the GCC at 3 and 6 months after vitrectomy was significantly correlated with the reduced retinal sensitivity.²

As Dr Soong and Mr Saha suggested, the outer layer of the neurosensory retina can be damaged by peeling of ILM. The ILM is the endfeet of the Müller cells and the tractional force induced by ILM peeling might be transmitted to the other end of the Müller cells, where they are attached to the photoreceptors by intermediate junctions (zonulae adherentes). However, we did not observe any significant changes of the external limiting membrane by SD-OCT in the area where the ILM had been peeled.

Lois *et al*³ have reported a higher rate of anatomic closure and lower reoperation rates after ILM peeling in eyes with a MH in their multicenter randomized controlled trial. Their rate of reoperation was relatively high (12% in ILM-peeled eyes and 48% in non-ILM-peeled eyes), but they concluded that ILM peeling appeared to have beneficial effects. They concluded that ILM peeling was more cost-effective than no ILM peeling to treat stage 2 or 3 MHs (they excluded stage 1 and 4 MH).⁴ We agree that ILM peeling is beneficial to treat MHs but ILM peeling can be harmful to retina as we have reported. It was not our purpose of this study to prove that the ILM peeling is necessary to close MH but to show there were some negative aspects of ILM peeling. Our goal was to close the MH, and peeling the ILM led to better closure rates. However, further studies are needed to determine whether ILM peeling is necessary to close MH with various preoperative conditions, for example, different MH stages, diameters, duration from onset, and microstructures observed by SD-OCT.

Conflict of interest

The authors declare no conflict of interest.

References

- 1 Soong TK, Saha N. Comment on 'Reduction of thickness of ganglion cell complex after internal limiting membrane peeling during vitrectomy for idiopathic macular hole'. *Eye* 2013; **27**(3): 455.
- 2 Baba T, Yamamoto S, Kimoto R, Oshitari T, Sato E. Reduction of thickness of ganglion cell complex after internal limiting membrane peeling during vitrectomy for idiopathic macular hole. *Eye* 2012; **26**: 1173–1180.
- 3 Lois N, Burr J, Norrie J, Vale L, Cook J, McDonald A *et al*. Internal limiting membrane peeling versus no peeling for idiopathic full-thickness macular hole: a pragmatic randomized controlled trial. *Invest Ophthalmol Vis Sci* 2011; **52**: 1586–1592.
- 4 Ternent L, Vale L, Boachie C, Burr JM, Lois N. Cost-effectiveness of internal limiting membrane peeling versus no peeling for patients with an idiopathic full-thickness macular hole: results from a randomized controlled trial. *Br J Ophthalmol* 2012; **96**: 438–443.

T Baba and S Yamamoto

Department of Ophthalmology and Visual Science,
Chiba University Graduate School of Medicine,
Chiba, Japan
E-mail: babatakayuki@nifty.com

Eye (2013) **27**, 455–456; doi:10.1038/eye.2012.295;
published online 18 January 2013