

without sub-tenons anaesthesia, and no associated painful complications occurred.⁵

The authors included data regarding the 'strength of burns per session'. Further clarification regarding these data would be welcomed from the authors. We presume that 'strength' is in reference to visible burn intensity that is related to laser power, whereby a significantly higher fluence (power × time/area) is required for the 100-ms PRP compared with the lower-fluence 20-ms PRP. The ETDRS recommended the standard burn intensity (grey-white) as the threshold for PRP laser.

The authors allude to the risks of secondary macular oedema in anaesthetised eyes; this statement is misleading. The risks of post-PRP macular oedema are associated with high-energy and long-pulse laser, underlying macular ischaemia, young type 1 diabetic PDR patients, and weekly multi-session PRP.⁵

We consider routine periocular anaesthesia for PRP to be an unnecessary extra step for most patients, with additional risks, discomfort, and extra financial cost. Pascal retinal laser may incur significant cost savings for NHS departments, as the treatment times, number of treatment sessions, and total required outpatient clinic sessions are significantly reduced. In the era of Pascal photocoagulation, multi-spot, short-pulse PRP may improve the comfort of the patient's laser journey, and increase the compliance with laser treatment over the long term.

Conflict of interest

PES has received financial support from OptiMedica Corporation.

References

- Richardson C, Waterman H. Pain relief during panretinal photocoagulation for diabetic retinopathy: a national survey. *Eye (London)* 2009; **23**(12): 2233–2237.
- Jain A, Blumenkranz MS, Paulus Y, Wiltberger MW, Andersen DE, Huie P *et al.* Effect of pulse duration on size and character of the lesion in retinal photocoagulation. *Arch Ophthalmol* 2008; **126**: 78–85.
- Sanghvi C, McLauchlan R, Delgado C, Young L, Charles SJ, Marcellino G *et al.* Initial experience with the Pascal[®] photocoagulator: a pilot study of 75 procedures. *Br J Ophthalmol* 2008; **92**: 1061–1064.
- Royal College of Anaesthetists and the Royal College of Ophthalmologists. *Local Anaesthesia for Intraocular Surgery*. RCA, RCOphth: London, 2001.
- Stanga PE, Muqit MMK, Henson DB, Young LB, Charles SJ, Turner GS *et al.* Manchester Study of Pattern Scanning Laser (Pascal[®]) Panretinal Photocoagulation (PRP) in Proliferative Diabetic Retinopathy [MAPASS]: 1500 burns pattern single session *vs* single-spot multiple session PRP. *Invest Ophthalmol Vis Sci* 2009; **50**: E-Abstract 196.

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Sir, Pain relief during panretinal photocoagulation for diabetic retinopathy

We read with great interest the article 'Pain relief during panretinal photocoagulation for diabetic retinopathy: a national survey' by Richardson and Waterman.¹ We have some comments to share with the authors.

First, this is a study assessing the pain during panretinal photocoagulation (PRP) from the doctors' perspective. It may not be objective and convincing enough for us to draw a conclusion regarding whether PRP is painful and whether use of analgesics is effective in reducing pain based on the data of the present study. In fact, the authors might have added a question in their questionnaire regarding how the doctors knew their patients were in pain during the procedure. Did they actually ask the patients or only judged from the patients' incompletion? We notice that some patients could not cooperate during the procedure not because they felt painful. They in fact only felt 'sore' in the eye that was under PRP, or felt the scattered light to be 'too shining' for the contralateral eye. Moreover, different doctors might have different levels of understanding of the likelihood of pain in question 7 described in this study. It would be more objective to assess the pain by asking the patients to fill in the pain-rating scales.

Second, the authors may need to attach the questionnaire in the article, as it is important for us to know how it was designed and what questions exactly were asked. Besides, according to what was described in the article, it seems that there were some missing data, such as the age and gender of those patients who often felt pain during the procedure. In our own clinical practice, we have noticed that young female patients were more sensitive to the pain caused by the laser burns and were less compliant during PRP.

Conflict of interest

The author declares no conflict of interest.

Reference

- Richardson C, Waterman H. Pain relief during panretinal photocoagulation for diabetic retinopathy: a national survey. *Eye (Lond)* 2009; **23**(12): 2233–2237.

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Sir, Reply to Stanga and Muqit, and YiJun Hu

We welcome the fact that our paper has stimulated debate on pain relief in laser therapy and that we have