

Sir,

The Royal College of Ophthalmologists cataract surgery guidelines: what can patients see with their operated eye during cataract surgery?

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I would like to comment on the patient information leaflet (Appendix I) in *Cataract Surgery Guidelines* published by the Royal College of Ophthalmologists in February 2001.¹ It states that patients given local anaesthesia during cataract surgery 'will not be able to see what is happening, but will be aware of a bright light'. I believe this advice contradicts recent findings published in the literature.

First, not all patients given local anaesthesia will be aware of a bright light. Studies by Talks *et al*² and Scott *et al*³ showed that 25% and 22% of their series of patients respectively had no perception of light following a peribulbar injection. Other studies have documented that 15.7–20% of patients had no light perception in the operated eye during cataract surgery under retrobulbar anaesthesia.^{4,5} Even under topical anaesthesia, six out of 102 patients in one series lost light perception for a short interval during cataract surgery.⁶

Second, besides light perception, many patients are aware of a variety of visual sensations in the operated eye during cataract surgery under retrobulbar, peribulbar or topical anaesthesia.^{4–10} These visual

sensations include perception of movements, flashes, one or more colours, surgical instruments, surgeon's hand/fingers, surgeon and a change in light brightness. The proportion of patients who perceived these sensations in several clinical studies is summarised in Table 1.

I am concerned that the advice that patients 'will not be able to see what is happening, but will be aware of a bright light' is neither complete nor accurate based on current evidence in the literature. Some patients may therefore become unduly anxious and frightened when they either experience additional visual sensations besides a bright light, or when they see only a dim light or have no light perception during the surgery. In fact, 15.4% of patients who were not informed of potential intraoperative visual sensations preoperatively in one series found their visual experience during phacoemulsification under topical anaesthesia frightening.⁹

Preoperative counselling about potential visual sensations that may be experienced during cataract surgery is conceivably more effective when the information given is complete and accurate. Preliminary findings from a multicentre randomised clinical trial show that patients who were given additional detailed counselling about potential intraoperative visual sensations were less likely to find their visual experience frightening than those who were not counselled.¹¹

Table 1 Intraoperative visual sensation during cataract surgery under local anaesthesia

	Authors (year)					
	Levin and O'Connor ⁷ (1989)	Murdoch and Sze ⁸ (1994)	Au Eong <i>et al</i> ⁵ (1999)	Au Eong <i>et al</i> ⁴ (2000)	Newman ⁶ (2000)	Au Eong <i>et al</i> ⁹ (2000)
Number of patients	26	56	100	70	102	52
Age (years)	–	71.5 (median) (range 33–89)	68.4 (mean) (range 40–87)	65.1 (mean) (range 37–87)	79 (median) (range 55–98)	67.5 ± 10.8 (mean ± SD)
Type of cataract surgery	Extracapsular cataract extraction	Extracapsular cataract extraction	Extracapsular cataract extraction	Phacoemulsification	Phacoemulsification	Phacoemulsification
Anaesthetic technique used	Retrobulbar anaesthesia	Majority peribulbar anaesthesia; some retrobulbar anaesthesia	Retrobulbar anaesthesia	Retrobulbar anaesthesia	Topical and subconjunctival anaesthesia	Topical anaesthesia
Sedation	None	None	Preoperative oral diazepam	Preoperative oral diazepam	None	Preoperative oral diazepam
Proportion of patients who perceived: ^a						
No light	–	4%	20%	15.7%	5.9%	0%
Light	–	96%	80%	84.3%	97.1%	100%
Movements	–	68%	39%	48.6%	18.6%	61.5%
Flashes	–	66%	36%	50.0%	6.9%	46.2%
Colour(s)	–	80%	56%	55.7%	71.6%	96.2%
Instruments	73.1%	–	16%	17.1%	11.8%	23.1%
Surgeon's hand/fingers	–	11%	10%	15.7%	–	25.0%
Surgeon	–		–	–	–	7.7%
Change in light brightness	–	64%	44%	44.3%	48.0%	46.2%

^aThe percentages do not add up to 100% because each patient may experience more than one visual sensation.

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Sir,

Pterygium excision and conjunctival mini-autograft
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We read with interest the article by John with the excellent outcome reported in this series of eight cases.¹ Conjunctival mini-autograft with excision of the pterygium was presented as an effective procedure for the surgical management of pterygium. The cited advantages in this first preliminary report include faster healing response, avoidance to work over the area of medial rectus muscle, absence of complications and excellent success rates.

However, certain aspects regarding the methodology and the rationale for the advantages of this technique should be further addressed. The measurements of the sizes of the pterygia and the criteria for case recruitment and selection were not specified. Details on the extent of subconjunctival dissection of pterygial tissue and whether the overlying conjunctiva was preserved were not elaborated in the report.

Various conjunctival autografting techniques have been previously described.^{2–4} Large conjunctival grafts of up to 15 × 15 mm may be harvested, and the donor sites left to self-regenerate with no significant scarring or loss of conjunctival motility.^{2,5,6} Pterygia tend to recur around the edges of the grafts (outflanking), and the importance of a sufficiently large graft is accentuated.^{6,7} For extensive or recurrent cases, in order to eliminate any active residual tissue, working over the area of medial rectus muscle is unavoidable. Furthermore, if this mini-auto grafting technique is applied, the conjunctiva over the remnant area medial to excision margin will remain inflamed and rugged in appearance. This is not uncommon in our experience even after extensive sub-conjunctival dissection of pterygial tissue with sparing of the overlying conjunctiva (unpublished data).

We believe that further work is required before conjunctival mini-autograft can be considered efficacious. We look forward to the results of a controlled study with larger numbers of patients. The author is to be congratulated for reporting this technique. Only through continual efforts will we be able to more fully understand this difficult but common problem (especially in areas with significant ultraviolet light exposure) and in turn, to help our patients most effectively.

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