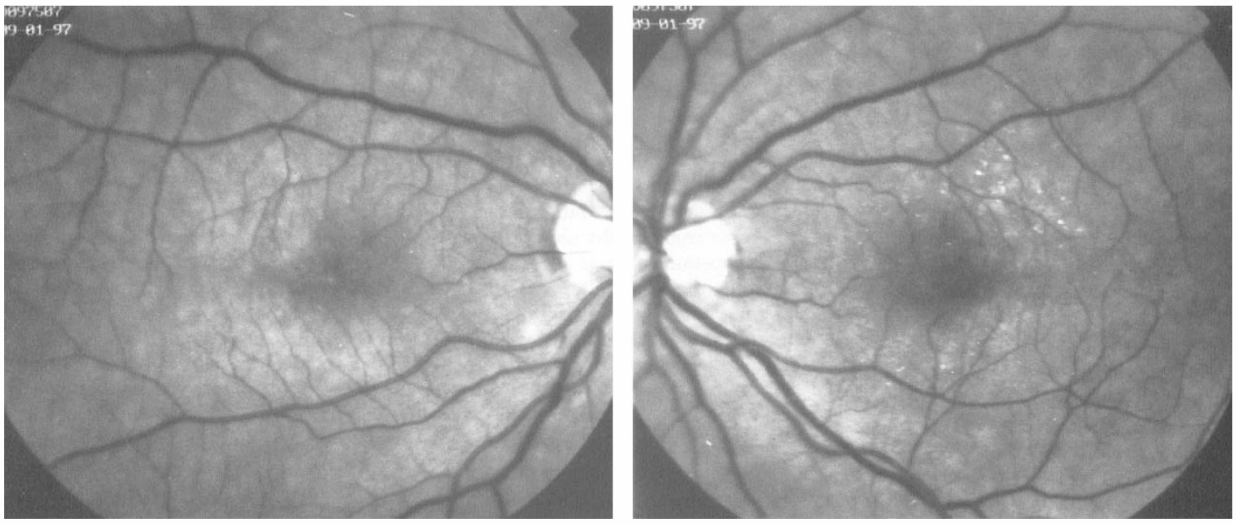

Fig. 2. *January 1997: red-free fundus photographs of right and left eyes showing persistent refractile crystals in the superficial retina.*

discontinuation of the drug, this is not universally the case. The case that we report shows that severe loss of vision can occur despite prompt cessation of the drug on development of visual symptoms.

At present the *British National Formulary*[10] mentions only 'visual disturbances . . . usually with very high doses' as a possible side effect of tamoxifen therapy. We feel, however, that patients on even low-dose therapy should be warned of potential ocular effects. Recommendations for women taking tamoxifen should be expanded to include advice to report any visual symptoms to the prescribing doctor immediately.

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Sir,

We read with interest the paper by Briggs *et al*.[1] We too undertook an audit to identify any difference in the patients' perception of pain during the various local anaesthetic techniques used in our department for cataract surgery. Every patient having local anaesthetic cataract extraction during the period 1 May 1995 to 31 October 1995 was enrolled on to the audit. After the injection the patient was given the choice of five responses to describe their pain experience. Surgery was then performed. Immediately after the surgery the same options were given to the patients to describe the pain of their surgery. The answers were then entered on a proforma. The surgeon indicated the type of anaesthetic and whether the surgery had been complicated or not.

A Kruskal–Wallis one-way analysis of variance (ANOVA) was used to test for differences between the four groups. Where differences were detected the Mann–Whitney *U*-test was used for individual comparisons. To allow for multiple comparisons $p < 0.01$ was considered to be statistically significant.

Some 339 cataract extractions were performed using four anaesthetic techniques: Sub-Tenon's, peribulbar, retrobulbar and subconjunctival. Administration of peripulbar and retrobulbar anaesthesia produced significantly higher pain scores than the sub-Tenon's and subconjunctival anaesthetic techniques. Patients who received subconjunctival anaesthesia experienced significantly higher pain scores during surgery in comparison with patients in the other groups. The results are shown in Table 1 and the average pain scores in Fig. 1.

An anaesthetist gave nine of the blocks; the rest were given by ophthalmic staff. An anaesthetist was recorded as being present in only 49 (15%) of the procedures and many lists had no anaesthetic staff in theatre. This may well reflect factors such as insufficient anaesthetic resources, the reluctance of anaesthetists to become involved in ophthalmic regional anaesthesia or ophthalmologists' reluctance to train and involve them. Practice in our institution currently falls short of ideal or best practice as outlined in the joint report of the Royal Colleges.[2]

A 5-point scale was used for the study as previous studies have shown low pain levels for these procedures.[3] Visual analogue scales can be difficult for patients who have just had cataract surgery as they may have impaired acuity in their unoperated eye.

The rates of surgical complications were similar in all groups and the results of this study do not suggest that choice of anaesthesia influences the outcome. However, a large controlled trial would

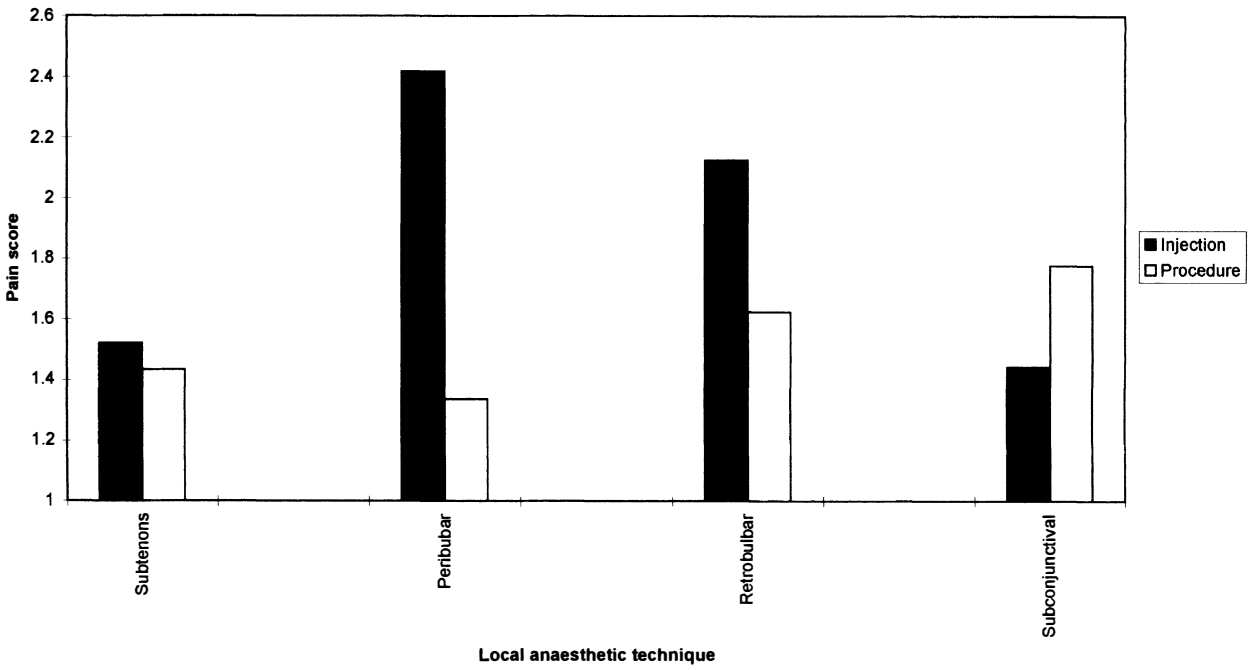

Fig. 1. *The average score for both injection and procedure for the four techniques.*

be required properly to assess the impact of different anaesthetic techniques on complication rates.

It was also noteworthy that there was considerable variation in pain scores with the same technique, which underscores the fact that skilful and sensitive administration of the anaesthetic is important for patient comfort.

Peribulbar injection is a blind technique requiring an intimate knowledge of orbital anatomy. Complications of globe perforation and optic nerve damage and muscle damage have all been reported, although serious complications were rare in a multicentre trial.[5] Peribulbar anaesthesia can also be complicated by retrobulbar haemorrhage; to date this has not been reported with sub-Tenon's anaesthesia although subconjunctival haemorrhage may occur. This, however, does not preclude surgery and is merely a cosmetic problem.

Our study agrees with Briggs *et al.* that sub-Tenon's anaesthesia provides acceptable pain relief for cataract surgery. Peribulbar and retrobulbar injections cause significantly more discomfort than sub-Tenon's or subconjunctival injections. Subconjunctival anaesthesia, although having the benefit of almost painless administration, is associated with the greatest pain during surgery. Sub-Tenon's anaesthesia may thus be the most patient-acceptable local anaesthetic technique as it is associated with little discomfort related to administration and provides good anaesthesia for cataract surgery. Comparisons between this technique and topical anaesthesia, with and without intracameral augmentation, need to be undertaken.[5] Sub-Tenon's anaesthesia was started in our unit 3 years ago and from only two regular users it is now used widely by both ophthalmologists and anaesthetists in our unit.

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Table 1. *Pain on injection and during surgery*

	Sub-Tenon's	Peribulbar	Retrobulbar	Subconjunctival
*Injection***				
Sub-Tenon's	–	**<0.0001**	**<0.0046**	0.58
Peribulbar	**<0.0001**	–	0.28	**<0.0001**
Retrobulbar	**<0.0046**	0.28	–	**0.0042**
Subconjunctival	0.58	**<0.0001**	**0.0042**	–
*Procedure**				
Sub-Tenon's	–	0.59	0.47	**0.0012**
Peribulbar	0.59	–	0.66	**0.0067**
Retrobulbar	0.47	0.66	–	0.35
Subconjunctival	**0.0012**	**0.0067**	0.35	–

Values are the p values. Those that indicate statistical significance (Mann–Whitney U-test) are shown in bold. Kruskall–Wallis one-way ANOVA: *$p < 0.01$; **$p < 0.0001$.

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Sir,

We thank Winder and colleagues for their interest in our paper.[1] We used a 10-point visual analogue score in our study, which was completed by each patient with the help of a nurse on the day following surgery. This did not cause any difficulty. A 5-point score is a reasonable suggestion; however, patients do occasionally experience extreme pain on administration of anaesthetic that may not be adequately illustrated by a shorter scale.

It would be very interesting to compare the discomfort and surgical complications associated with cataract surgery under what we believe to be the best injectable method of local anaesthesia, i.e. the sub-Tenon's technique, with those under topical anaesthesia that provides no akinesia. A previous study comparing retrobulbar anaesthesia with sub-conjunctival anaesthesia found no difference in the complication rate between these two techniques.[2] Our study, and that of Winder and colleagues, has shown that it is possible to provide pain-free cataract surgery under local anaesthesia. The onus is therefore on all ophthalmologists to ensure that their patients do not suffer discomfort during cataract surgery, whatever the chosen method of anaesthesia. An ideal subject for clinical audit!

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Sir,

We would like to comment on some points raised by the interesting paper on congenital hypertrophy of the retinal pigment epithelium (CHRPE) and familial adenomatous polyposis (FAP) by Reck *et al*.[1] The aim of their study was to correlate mutation site with CHRPE status in a group of patients with FAP. We feel their discussion of the previous literature on CHRPE and mutation site simplistic and thus misleading, making their conclusions more secure. Previous studies[2–4] have supported a CHRPE-positive phenotype with mutations upstream of exon 9 to codon 1387 but not with mutations before exon 9. However, mutations in exon 9 can result in either a CRPHE-positive or -negative individual within the same family,[3,4] but this was not mentioned in Reck *et al*.'s paper. Identical FAP mutations in unrelated patients can also demonstrate marked variability.[5]

Reck *et al*. (p. 300) make the point that the 'CHRPE status provides a guide to the likely position of the causative mutation', but we feel the CHRPE status of the family should be determined. In our paper[6] on the value of CHRPE in screening for FAP it was found that there was a large intrafamilial variation in the incidence of CHRPE in individuals with the disease. Reck *et al*.'s study findings and conclusions were based on isolated cases. Readers should be aware of intrafamilial variation and that exon 9 mutations can result in a CHRPE-negative or -positive individual within the same family. 'Considerable reassurance' (Reck *et al*., p. 300) would not be gained from a CHRPE-negative member in these families.

We therefore feel that the role of CHRPE in screening individuals at risk of FAP needs careful consideration. We do not feel on the basis of ocular screening that individuals at risk of FAP should be excluded from colonoscopic screening unless the CHPRE status of the family has been firmly established. Mutational analysis, although expensive and time-consuming, will hopefully provide the most valuable tool for screening.

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Sir,

The comments made by Willoughby and Hickey-Dwyer are perfectly valid. Our discussion was deliberately simplistic because we have published a more detailed paper with the molecular genetic analysis and refer to this paper in the text.[1] In our discussion we make the observation that in a family with CHRPE, an at-risk person negative for CHRPE has 'a reduced risk of carrying the defective gene'. We also make the point that 'the only test which is 100% certain to exclude an individual from carrying the gene is mutation analysis'. Since the advent of molecular genetic testing in FAP has allowed the carrier status to be determined to a high degree of certainty in the vast majority of families, the clinical value of an ophthalmic examination is less clear. It is still interesting, however, to observe correlations between genotypes and phenotypes. The variation between family members and between the two eyes of a single individual presumably indicates that the development of CHRPE is not solely dependent on the underlying constitutional mutation but on a second somatic event in the retinal pigment epithelial cells, like many of the other extra colonic manifestations of this disease.