Correspondence

Cryotreatment of retinopathy of prematurity

SIR, We greatly regret not including Hindle's paper¹ which, to the best of our knowledge, is the first clinicopathological case report to be published in the English literature about cryotherapy on peripheral neovascularisation in retinopathy of prematurity. This report is very important in showing complete regression of active ROP after direct freezing of the shunt and new vessels at the retinal periphery. Hindle's results contrast with our clinicopathological findings² in that he found regression of the neovascularisation after cryotreatment directly over the new vessels, and, also, that accidental treatment of a sectorial avascular area did not result in complete regression of the retrolental fibroplasia changes. In our case intentional treatment of the avascular zones only with avoidance of direct treatment of the neovascular changes, caused complete regression of the disease. We have no explanation for this difference, but can confirm from vast clinical experience that treating progressive changes of ROP by freezing only the avascular zones results in complete regression of the disease.³

Therefore we still maintain that this technique is to be preferred, since the danger of operative and post-operative haemorrhage from the fragile new vessels is minimised, and less trauma is caused to the eye by freezing the more peripheral (anterior) areas transconjunctivally. Nevertheless, Hindle's paper should be credited as the first to be published on this subject in the English literature.

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References

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- 3 Ben-Sira I, Nissenkorn I, Grunwald E, Yassur Y. Treatment of acute retrolental fibroplasia by cryopexy. *B J Ophthalmol* 1980; 64: 758-62.

SIR, I was most pleased to receive a copy of the letter from Nissenkorn *et al.* As I had not had an opportunity to see their article,¹ I found it most refreshing that the authors extended an apology to me before there was any perception of the need for an apology.

I am quite familiar with the very credible work reported by these authors² using cryotherapy applied to the avascular retina only, and aborting the progression of extraretinal fibrovascular proliferation of retinopathy of prematurity to more severe stages and accordingly preventing the cicatricial sequelae or retrolental fibroplasia that would result in visual disability.

Since Leyton and I conducted the clinical pathological

correlation on the case reported in 1978,³ I have adhered essentially to treatment of the transition zone between vascular and avascular retina, treating the ridge and the extraretinal fibrovascular proliferation contiguous with the ridge. Of course, the Cryospot does treat some of the avascular retina just anterior to the ridge but the remainder of the avascular retina is spared from treatment. The results of this therapy have been reported.⁴

I have also found that when the treatment is applied at the appropriate time in the spectrum of progression of retinopathy of prematurity, complete regression of the disease results. All eyes have been treated transconjunctivally. I have experienced vitreous haemorrhage, localised to the area of extraretinal fibrovascular proliferation that was treated usually, and which resolved spontaneously with no apparent ill effect. I have not experienced any postoperative haemorrhages. Considering the fact that I treat a lesser area of the eye, the degree of trauma inflicted, whether being less or more, is clearly speculative.

Nagata⁵ and Majima *et al.*⁶ and many other Japanese investigators have employed photocoagulation at the anterior aspect of the ridge and to the avascular retina just contiguous with it. They do not advocate treatment of the extraretinal fibrovascular proliferation with photocoagulation, which would be more likely to induce haemorrhages. Their reports of success are equally convincing with an even lesser area of destruction than that produced by cryotherapy. Accordingly it seems that a number of modalities will interrupt the progression of the disease if applied at the appropriate time in the spectrum of the disease.

With the international classification of retinopathy of prematurity⁷ the stage is now set for collaborative studies that can test (a) modality of treatment (b) location of treatment, (c) timing of treatment.

Reports such as the recent report by Nissenkorn *et al.*¹ and my 1978 report in collaboration with Leyton³ are to be encouraged. Although anecdotal, these opportunities for detailed study can be very revealing. For example, in the eyes Leyton and I studied, where the extraretinal fibrovascular proliferation had been ablated, there was no evidence of retinal neovascularisation at the edge of the cryo scars except in the area where the cryotherapy was anterior to the ridge-extraretinal fibrovascular proliferation. It must be pointed out that the avascular retina in this area had been treated, but not as completely as practised by Nissenkorn *et al.* In their report, however, Garner found vessels at the internal surface of the retina at the posterior edge of the cryo scar. In addition he found that the neuroretina at the posterior edge of the cryo scar was elevated to create a scalloped ridge throughout virtually the total circumference. Additionally they reported the existence of vitreous veils in the left eye which had been allowed to progress to stage 4 disease in the temporal area. Leyton and I found no similar activity except in the area where the ridge-extraretinal fibrovascular proliferation had not been treated. This suggests that failure of treatment of the ridge-extraretinal fibrovascular proliferation complex may leave a skeletal fibrotic remnant of the extraretinal proliferation which could lead to retinal problems in the future.

In conclusion, may I assure the authors that in addition to being impressed with their integrity and concern that I might be offended by their minor oversight I am grateful for

this retrospective opportunity to share opinion on the management of this very complex disease.
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- 7 An international classification of retinopathy of prematurity. In press.

Slit-lamp photography

SIR, I wish to make a simple suggestion regarding the problem of focusing accurately by Thaller's method¹ on the eye to be photographed. Rather than change the focusing screen in the camera as suggested, the simple expedient of turning the camera mounted on the eyepiece clockwise through 90° allows the observer to look with his right eye through the left-hand eyepiece of the slit-lamp itself and focus accurately with the slit-lamp joy-stick. The monocular view obtained from the left-hand ocular is not of course the same as that obtained from the right-hand ocular. But, if important, this simple matter of alignment can be adjusted to the desired position through the camera itself, as it does not require critical focusing. This can be finally adjusted through the other eyepiece, as suggested, provided the subject does not move his eye at all in the meantime.

The vertical orientation of the camera results in the medial to lateral axis of the palpebral aperture occupying the shorter rather than the longer axis of the resulting photograph, which is less satisfactory and requires complete reorientation, but this might be acceptable if superior focusing is obtained in this way.

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Reference

- 1 Thaller VT. An inexpensive method of slit-lamp photography. *Br J Ophthalmol* 1983; **67**: 63-6.

SIR, In reply to J. D. Huggan's suggestion of focusing the camera through the second eyepiece I wish to make the following points: (1) Unless the second eyepiece is fitted with crosshairs, accurate focusing can be difficult due to accommodation. (2) Light reflexes viewed by the camera are different from those viewed through the second slit-lamp eyepiece and may interfere with the subject matter of

the photograph. (3) If retroillumination is required for the photograph, this is again difficult to adjust through the second eyepiece.

In practice accurate focusing is not difficult through a ground glass focusing screen, as this precludes the possibility of accommodation. The image is, however, rather dim with little depth of field, which makes viewing less pleasant.
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Book reviews

Plastic and Reconstructive Surgery of the Eyelids. By CHARLES K. BEYER-MACHULE. Pp. 135. DM 68-00. Thieme-Stratton: New York. 1983.

This book was originally published in German as part of a series of books on eye surgery. It contains a number of procedures which the author finds useful and predictable and is not intended to be a comprehensive guide to eyelid surgery. However, this English edition has been expanded to cover some of the newer techniques. The six chapters are devoted to anatomy, lid trauma, lid malpositions, upper and lower lid reconstruction, lid retractions, and blepharoplasty procedures.

Anatomy is covered in note form. There is a major concentration on lacrimal reconstruction in the chapter on lid trauma, and the author insists on repairing an upper canaliculus, which many surgeons consider controversial. The chapter on lid malposition covers entropion and ectropion in considerable detail, giving good descriptions of the various procedures and full credit to the original authors, including diagrams taken from their publications with permission. Lid reconstruction is covered with logical step by step descriptions, but there is sometimes insufficient explanation of why alternative procedures may be preferable in different situations; for instance, the management of marginal defects is not differentiated from that of more extensive defects. There is an excellent extensive, comprehensive, and up-to-date section on composite lid grafting under the heading of new techniques which covers full-thickness, tarsomarginal, and tarsoconjunctival grafts and the various modifications which have improved their effectiveness. A clear description of upper lid lowering and lower lid raising techniques is given in the chapter on lid retraction, and blepharoplasty is covered factually with sensible emphasis on patient evaluation and the avoidance of complications.

The book does not cover ptosis or lacrimal, socket, or orbital surgery, but there must be omissions in any small book in the interests of maintaining its size. The procedures which are covered are well described, with excellent and profuse diagrams. The possible complications and their management are mentioned, and there is a very comprehensive and current list of references for those wishing to explore the original descriptions further. It is impressive how many individual contributions the author himself has made to the field of plastic and reconstructive surgery of the