CORRESPONDENCE

Ophthalmic services for children

EDITOR,—It was with interest that I read the report of the joint working party produced by the Royal College of Ophthalmologists and the British Paediatric Association, December 1994.¹ This is an excellent report, clearly presented and easily readable. The report makes many very worthy recommendations, but a degree of public debate will be required to bring these recommendations into being. I would like to highlight a few points:

(1) Do paediatric senior house officers (or obstetric senior house officers, if there are no resident paediatricians) actually receive at least one tutorial near the beginning of their 6 month posts by an ophthalmologist in most hospitals? (Ch 1.5). If not, in the same way that many units provide teaching for casualty officers, should we not do likewise for the paediatricians? This teaching could be provided by a registrar or senior registrar.

(2) With respect to screening for retinopathy of prematurity (Ch 4.1.1), the report states 'a designated ophthalmologist, suitably trained, should provide this service'. In many hospitals no one provides this service, and in some it is delegated to the registrar. The question 'Is this acceptable?' should at least be asked.

(3) Chapter 7, paragraph 4, of the report advises that a multidisciplinary visual disability team should be established in each district to assess children, inform, counsel, and offer practical support to families. I have been completely amazed at how little parents know about available practical support for their chronically handicapped child. (Few have even heard of toy libraries or have got a copy of the BBC's *In touch* handbook.) I would suggest it is our responsibility to inform them and to initiate the establishment of district visual disability teams.

I would be very interested to hear the views of colleagues.

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1 *Ophthalmic services for children*. Report of a joint working party. London: The Royal College of Ophthalmologists and the British Paediatric Association, December 1994.

Proliferation of lens epithelial remnants after Nd-YAG laser capsulotomy

EDITOR,—Jones and colleagues recently described massive proliferation of lens epithelial remnants following Nd-YAG laser capsulotomy in patients with pre-existing retinal pathology.¹ We would like to add to their contribution by describing a similar case but with no associated retinal pathology. Our patient, an 80-year-old woman, had bilateral open angle glaucoma associated with pseudoexfoliation. Owing to uncontrolled intraocular pressures she had undergone bilateral drainage procedures by trabeculectomy. Three years later she had a left extracapsular cataract extraction. Visual acuity improved from 3/60 to 6/9 but 9 months later an Nd-YAG laser capsulotomy was necessary because of progressive posterior capsular

opacification reducing visual acuity to 6/18. Visual acuity initially improved to 6/9 but deteriorated over the following 6 month period to perception of light only, as a result of the proliferation of vascularised lens/capsular remnants anterior and posterior to the intraocular lens. Anterior lens capsular vessels were also present in the crystalline lens in the right eye, which had not been previously noted. The capsular remnants in the left eye were excised by an anterior corticocapsulectomy using a posterior vitrectomy probe and anterior infusion.

Brooks and associates have postulated that anterior segment ischaemia may be found in association with pseudoexfoliation of the lens capsule.² This would help explain the presence of bilateral vascularisation of the capsule in this patient. It may also explain the proliferation of lens capsule remnants anterior to the intraocular lens. Nd-YAG laser capsulotomy seems to promote proliferation of the lens epithelium¹; in the setting of anterior segment ischaemia it may lead to massive proliferation.

This would suggest that lens capsule neovascularisation can occur with pseudoexfoliation in eyes that have undergone anterior segment surgery and patients with both features are also at risk of lens cell proliferation following Nd-YAG laser capsulotomy which may result in a profound decrease in visual acuity.

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- 1 Jones NP, McLeod D, Boulton ME. Massive proliferation of lens epithelial remnants after Nd-YAG laser capsulotomy. *Br J Ophthalmol* 1995; 79: 261-3.
- 2 Brooks AMV, Gillies WE. The development of microneovascular changes in the iris in pseudoexfoliation of the lens capsule. *Ophthalmology* 1987; 94: 1090-7.

Laser photodisruption of visible retinal artery emboli

EDITOR,—We read with interest the report by Dutton and Craig describing treatment of a retinal embolus by photocoagulation.¹ The authors described successful laser disruption of a visible embolus in a 52-year-old woman with branch retinal artery occlusion refractory to standard management. They used a continuous argon blue-green laser set at 0.1 W and 50 μ m spot size. We have attempted similar treatment with an argon green laser in both an animal model of retinal artery occlusion and in a patient with visible emboli, but we have experienced poor outcomes.

We have recently developed a rabbit model of retinal artery occlusion using human atherosclerotic material (Ciulla *et al*, *Curr Eye Res*, in press). Fresh human atherosclerotic plaque was harvested from atherosclerotic human aorta by mechanical removal and suspension in normal saline. The suspension was agitated vigorously to produce small particles, which were separated into various sizes by filtration through mesh filters. The common carotid artery of the anaesthetised rabbit was isolated by neck dissection, cannulated, and injected with suspensions of human atherosclerotic plaque. Ophthalmoscopy and fluorescein angiography confirmed that

plaque particles of less than 105 μ m reliably produced branch retinal artery occlusion, while larger plaque particles of less than 149 μ m reliably produced central retinal artery occlusion. Four rabbits with visible branch retinal artery emboli underwent attempted laser photodisruption with argon green laser in a fashion similar to that described by Dutton and Craig. Multiple spots of argon green laser (4-10 spots at 0.1-0.2 W, 50 μ m spot size, and 0.1 second exposure) were applied to the embolus. The procedure was unsuccessful in three rabbits. In a fourth rabbit, the visible embolus was fragmented by the laser energy, and the fragments passed distally.

The treatment was also attempted in a 69-year-old woman who presented within 1 hour after experiencing acute loss of vision in the left eye. She was noted to have a refractile intra-arterial embolus at the optic disc. Despite ocular massage and anterior chamber paracentesis, visual acuity remained at light perception. Laser photodisruption, using the settings noted above, was attempted. Arterial circulation appeared to improve, but the embolus remained in place. One week later, visual acuity remained at light perception and the retinal vessels were reperfused, with the embolus located distally within the inferotemporal arteriole.

In summary, laser treatment in our hands, does not reliably disrupt visible retinal artery emboli. This procedure was successful in only one of four rabbits with visible retinal emboli consisting of human atherosclerotic material. Similarly, it is unlikely that this laser treatment had any effect in the treated patient since no acute disruption or movement of the embolus was noted. However, since there is currently no effective treatment in retinal artery occlusion and since there was no apparent laser mediated damage to the retinal vessels noted on fluorescein angiography in the affected patient, it is not unreasonable to attempt laser disruption. Treating ophthalmologists should only employ this modality after all standard methods have failed and after the patient has been informed of the limited chance for success.

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1 Dutton G, Craig G. Treatment of central retinal artery occlusion by photocoagulation [Letter]. *Br J Ophthalmol* 1989; 73: 580-1.

Reply

EDITOR,—The rationale for the choice of treatment described in our letter to the *British Journal of Ophthalmology* in 1989 was as follows:

(1) The melting point of cholesterol is such that the cholesterol of synchysis scintillans in the anterior chamber of an aphakic eye disappears when a hairdryer is played upon the closed eyelid.¹

(2) Cholesterol, like xanthophyll, is yellow and thus will absorb blue light with conversion to heat. (We did not anticipate that the green component or the argon laser light would heat the yellow embolus to the same degree and for that reason did not filter out the blue light.)

(3) Warming of the embolus requires a continuous application of energy until

melting takes place. Intermittent short laser applications would not be expected to achieve the same effect.

In our patient (in whom established treatment methods had failed) we applied continuous argon blue-green laser light with the minimum energy and spot size available. After a few seconds the embolus vanished and reappeared at the next retinal arterial junction. A repeat identical application resulted in the embolus disappearing altogether. Unfortunately, our treatment did not restore vision but we anticipate that it would do so in any similar patient with a very short history of loss of vision.

Ciulla and colleagues did not apply the above rationale and the lack of therapeutic efficacy from short duration multiple applications of argon green only light is perhaps not surprising.

The concept of using a short pulsed laser is an interesting alternative, but vessel rupture with the potential for intraocular bleeding if such a rupture takes place upstream of the embolus is a theoretical hazard.

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1 Yanoff M, Fine BS. *Ocular pathology. A text and atlas.* Hagerstown: Harper and Row, 1975: 151.

NOTICES

Wellcome General Overseas Travelling Research Fellowships 1994-95

The purpose of these fellowships is to allow postdoctoral scientists and medical graduates to gain further research experience by working in leading laboratories in the UK or the Republic of Ireland. Applications are invited from such workers who wish to undertake a research project in any branch of the natural or clinical sciences, which has a bearing on human or veterinary medicine, with the exception of cancer.

Applicants may be from any country outside Europe, with the exception of New Zealand and the USA for whom special schemes are available. Awards will be made on the basis of the research proposal. The research proposed should be relevant to the research interests of the candidate in his/her own country. Awards are made for one year in the first instance, although requests for an extension may be considered. Fellowships provide a stipend within the range from £13 941 to £27 869 per annum, depending on age and experience. They also include the cost of research, attendance at scientific meetings, and return travel.

Candidates must be nominated by a sponsor in the UK or the Republic of Ireland, through whom all initial inquiries should be made. A preliminary proposal should include a one or two page outline of the research proposed, the curriculum vitae of the candidate, and a letter indicating that he/she has a position to return to at the end of the fellowship. There are no special deadlines for this scheme and

applications may be submitted at any time during the year.

Requests for application forms should be addressed to: Dr J M Wilkinson, The Wellcome Trust, 183 Euston Road, London NW1 2BE. Tel: 0171-611 8407.

Candidates from New Zealand and the USA should contact the Health Research Council of New Zealand, Auckland, NZ or the Burroughs Wellcome Fund, Morrisville, NC 27560, USA, respectively, for details of appropriate schemes.

British and Eire Association of Vitreo-Retinal Surgeons

The next meeting of the British and Eire Association of Vitreo-Retinal Surgeons (BEAVRS) will be held at Cameron House, Loch Lomond, Glasgow on 5-6 October 1995. Members will be contacted with further details in due course; any other doctors wishing to attend should contact Dr H M Hammer or Dr T Barrie, Glasgow Eye Infirmary, 3 Sandyford Place, Glasgow G3 7NB. (Tel: 0141-211 6767; Fax: 0141-211 6770.)

European Programme of Continuing Education

A symposium on angiography and laser will take place at the University of Créteil on 6-7 October 1995. Further details: Professor Gabriel Coscas, Clinique Ophtalmologique Universitaire- Hôpital de Créteil, 40 Avenue de Verdun, 94010 Créteil Cedex, France. (Tel: 45 17 52 24; Fax: 45 17 52 27.)

First Congress of Surgery of Bosnia and Herzegovina

The first congress of surgery of Bosnia and Herzegovina with international participation will be held at the Congress Hall of the Holiday Inn hotel, Sarajevo from 8 to 11 October 1995. Foreign surgeons are invited to attend; sponsors are also welcome. Further details: Professor Hasan Piranic, general secretary, Stjepana Tomica, bb, 71000 Sarajevo, Republic of Bosnia and Herzegovina. (Tel: 387 71 644 696; Fax: 387 71 471 976.)

Joint European Research Meeting in Ophthalmology and Vision

JERMOV, the Joint European Research Meeting in Ophthalmology and Vision, will hold its second meeting in Montpellier on 14-18 October 1995. Further details: JERMOV Secretariat - Chairman Agency, Les Portes d'Antigone 43, Place Vauban, 34000 Montpellier, France. (Tel: +33 67 15 99 00; Fax: +33 67 15 99 09.)

The Jules François Prize, 1997

The Jules François Prize of the Belgian ophthalmological societies of \$US 10 000 will be awarded for the sixth time in 1997 to a young scientist who had made an important contribution to ophthalmology. The aim of

the prize is to encourage scientific research in ophthalmology. There is no special theme. Fundamental as well as clinical research will be considered. The age limit is 40 years by 31 December 1995. The application: a curriculum vitae, and three copies of published papers must be forwarded to the secretary of the Jules François Foundation. The closing date for applications is 31 December 1995. Further details: Dr J D'Haenens, Secretary of the Jules François Foundation, E Beernaertstraat 34, B-8400 Oostende, Belgium.

Photonics West '96

The International Society for Optical Engineering will hold an international symposium entitled 'International Biomedical Optics, Lasers and Integrated Optoelectronics and Electronic Imaging: Science and Technology' from 27 January to 2 February 1996 at the San Jose Convention Center, San Jose, California, USA. Further details: SPIE, PO Box 10, Bellingham, WA 98227-0010, USA. (Tel: 360-676-3290; Fax 360-647-1445.)

International Symposium on Biomedical Optics

A conference on 'Laser inflicted eye injuries: epidemiology, prevention and treatment' will take place in San Jose, California, from 27 January to 2 February, 1996 as part of the International Symposium on Biomedical Optics. Further details: SPIE, PO Box 10, Bellingham, WA 8227-0010, USA. (Tel: 360-626-3290; Fax: 360-647-1446.)

First European Forum on Quality Improvement in Health Care

The first European forum on quality in health care will be held on 7-9 March 1996 at the QEII Conference Centre, London. Further details: Clare Moloney, BMA Conference Unit, BMA House, Tavistock Square, London WC1H 9JP. (Tel: 0171-383 6663; Fax: 0171-383 6478.)

2nd International Symposium on Retinal Pigment Epithelium

The 2nd international symposium on retinal pigment epithelium and the 4th meeting of the European Macula Group will take place from 29 May to 1 June 1996 at the Palazzo Ducale, Genoa, Italy. Further details: Secretariat, Medicina Viva, Servizio Congressi, Viale dei Mille, 140, 43100 Parma, Italy. (Tel: 39-521-290191/290194; Fax: 39-521-291314.)

International Symposium on Fluorescence Angiography

The International Symposium on Fluorescence Angiography will be held in St-Gall, Switzerland on 8-12 September 1996. This will immediately follow the Gonin meeting in Bern, Switzerland, which will take place on 1-6 September 1996.