

## MAILBOX

### Prophylactic scleral buckle for prevention of retinal detachment following vitrectomy for macular hole

EDITOR,—Chang *et al*<sup>1</sup> deserve credit for calling attention to one of the most serious complications following macular hole surgery—retinal detachment.

Occurring in typically 4% to 7% (1–18%) of such eyes, retinal detachment usually results in a final visual acuity significantly lower than in eyes without such complication,<sup>2,3</sup> even if surgery to reattach the retina is successful. Prophylaxis of retinal detachment is therefore of great importance.

Certain precautions such as careful peeling of the still attached posterior hyaloid face and careful inspection of the retinal periphery with scleral indentation before fluid-air exchange are useful in reducing the rate of postoperative retinal detachment. Having been alerted to the unexpected frequency of this complication, however, such precautions are already observed by most surgeons performing macular hole repair. Additional preventive measures are warranted for those continuing to experience retinal detachment despite careful techniques.

Prophylactic scleral buckling has been found by some authors to reduce the incidence of retinal detachment in trauma,<sup>4</sup> while others have not identified it as effective or necessary.<sup>5</sup> An encircling band is useful in reducing traction at the vitreous base, but perhaps less effective in preventing retinal detachment in the presence of a retinal break created by a partial vitreous detachment as in case of macular hole surgery. Indeed, the authors' incidence of retinal detachment in eyes despite placing a prophylactic buckle was still 5.9%, a figure most surgeons would consider rather high. In addition, an encircling band has certain morbidity that cannot be ignored.<sup>6</sup>

Since 1995 we have elected to reduce the incidence of retinal detachment in our macular hole surgeries using a different strategy. Following fluid-air exchange, we perform indirect ophthalmoscopic (IDO) laser cerclage in a moderately tight PRP pattern (800–1200 spots) from the ora serrata to the equator, sparing the horizontal meridians. The postoperative peripheral visual fields compared with the those of the fellow eye have not been significantly reduced, and no complication of IDO laser retinopexy was seen in over 200 eyes. We have followed 94 consecutive eyes for over 6 months after surgery with no case of retinal detachment.<sup>7</sup> This contrasts with our other series in which the surgical technique was identical except that no laser cerclage was performed. In this series of 47 consecutive eyes, four (7%) developed retinal detachment (Mester and Kuhn, submitted for publication).

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### Reply

EDITOR,—We would like to thank Morris *et al* for bringing to light some of the important issues regarding macular hole surgery that we discussed in our article. One of the fundamental points that remain regarding this subject is a determination of the actual retinal detachment rate for this procedure. In a multicentred randomised clinical trial for macular hole surgery the retinal detachment rate was noted to be as high as 14%.<sup>1</sup> Several retrospective series have noted a considerably lower rate although this may reflect a “reporting bias”. That is to say, retrospective series with lower than expected success rates or higher than expected complication rate often are not submitted for publication review.

If we assume that the detachment rate *may* be higher for patients undergoing macular hole surgery, it then behoves us to identify methods of lowering this incidence. Morris and colleagues have describe a novel technique of prophylactic laser cerclage that likely would have lower ocular morbidity. Prospective evaluation of this and other methods would be helpful in investigating the optimum approach to this problem.

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- 1 Banker A, Freeman W, Kim J. Vision-threatening complications of surgery for full thickness macular holes. *Ophthalmology* 1997;104:1442–53.

### Bilateral optic disc oedema associated with latanoprost

EDITOR,—Fact or rare coincidence? I read with interest Stewart *et al*'s report, of bilateral optic disc oedema associated with latanoprost in the September 1999 issue of the *BJO*.<sup>1</sup>

Despite the fact this association looks correct at first sight, the patient has not been rechallenge with the same drug, and therefore coincidence in producing this particular side effect cannot be fully ruled out.

I spent a year as a clinical fellow in glaucoma at Wills Eye Hospital (WEH) in Philadelphia, USA, in 1996–7. This particular year incidentally happened to be a crucial year for a number of newly developed glaucoma medications which had just started to gain popularity.

At WEH we often observed a number of peculiar adverse effects from these drugs, some of which were extremely rare and some of which were relatively common.

Our mentor at the time Dr George L Spaeth, an individual with immense experience in the field of glaucoma, cautioned us to neither attribute nor report any of those adverse effects unless we could reproduce similar effects after rechallenging the patient with the same medication.

A large number of new glaucoma medications are almost ready for practical use, enriching our armamentarium, within the next couple of years.

I suggest therefore we should all be more careful in attributing adverse effects and would urge that we become more rigorous in applying the “Spaeth rule” which is: Observe the side effect, stop the drug, and seek normality before subsequently rechallenging the patient with the same drug to see if the side effect is reproducible. This practice of course necessitates the patient's consent and it is only appropriate if the side effects are neither life nor sight threatening ones.

If for any reason, however, this is not possible, this fact should be stated as a true limitation or a weakness of our observation, since pure coincidence cannot be otherwise statistically excluded as the one and only culprit.

I M Aslanides is currently the scholar of “Alexander S Onassis” Foundation for the academic year 1999–2000.

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- 1 Stewart O, Walsh L, Pande M. Bilateral optic disc oedema associated with latanoprost. *Br J Ophthalmol* 1999;83:1092–3.

### Membrane formation in the chamber angle after failure of argon laser trabeculoplasty

EDITOR,—I read with interest the article by Koller and co-workers,<sup>1</sup> in which the authors investigated causes and risk factors for membrane formation in the anterior chamber after argon laser trabeculoplasty (ALT). In their discussion the authors conclude that ALT and especially repeated ALT represent a risk for late membrane formation over the trabecular meshwork, which leads to late failure of ALT. They suggest that both late membrane formation and immediate intraocular pressure (IOP) spikes after ALT are induced by the same mechanism—that is, laser induced inflammation.

I agree with the authors that laser induced inflammation is a possible factor for subacute and late membrane formation over the trabecular meshwork. In a retrospective study<sup>2</sup> in which the duration of success (IOP <22 mm Hg after treatment) was investigated we found that the length of success was significantly shorter in eyes which received no topical anti-inflammatory medication after ALT compared with the eyes which received such a treatment for 5 days following the same procedure. Is the risk for membrane formation similar after laser trabeculoplasties using different lasers? The authors did not discuss this question; however, this is a point of practical importance. In a prospective, comparative clinical and morphological study<sup>3</sup> one randomly selected eye of the patients underwent a conventional ALT, and the contralateral eye received a similar treatment but with a very low energy level of a pulsed Nd:YAG laser. In this study, which I performed several years before selective laser trabeculoplasty was developed, both eyes of the participants had identical type of open angle glaucoma in a

very similar stage before treatment. The clinical efficacy of both types of laser trabeculoplasty was similar. The most important difference I found in the eyes requiring trabeculectomy was the presence of a membrane over the trabecular meshwork after ALT and the absence of this membrane after Nd:YAG laser trabeculoplasty in the same patients. These findings suggest that the type of laser or its thermal effect are also important factors when the causes of late failure are discussed.

In contrast with the authors' opinion I do not think that immediate IOP spikes 1 or 2 hours after ALT are caused by prostaglandins or inflammation. In clinical studies it was clearly shown that either topical corticosteroid or non-steroid pretreatments failed to reduce the early IOP spike though both types of treatments did reduce the inflammation after ALT.<sup>4-7</sup> This clearly shows that late and acute IOP elevations are caused by different mechanisms. Recently it was shown<sup>8</sup> that the trabecular meshwork contains contractile elements which are contracted by endothelin-1 (ET-1). The contraction causes a decrease of the outflow and a resulting IOP elevation. Lower ET-1 concentration, however, may induce relaxation via endothelin B receptors. In experimental studies<sup>9</sup> exogenous ET-1 injected into the anterior chamber caused the typical biphasic IOP alterations we experience after ALT in clinical praxis: an immediate spike is followed by a prolonged (10–15 days) pressure decrease. Long term IOP decrease after ALT is caused by the biochemical alterations of the trabecular meshwork, and appear only after some weeks following the laser treatment. To investigate the potential role of ET-1 in the development of IOP spikes after ALT we performed ALT in rabbits.<sup>10-12</sup> Very high ET-1 concentrations were found in the aqueous humour already 30 minutes after treatment, which persisted for 4 hours, but disappeared within 24 hours, and was not found in the sham treated contralateral eyes. This ET-1 release from the uveal tissue (which is known to be rich of endothelins) was associated with acute pressure elevation and later decrease on the treated but not on the sham treated eyes of the same animals. These findings suggest that the acute pressure spike after ALT is caused by a mechanism different from that of the long term pressure elevation: the latter is promoted by inflammation while the former maybe caused by acute endothelin release from the damaged uveal tissue.

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## NOTICES

### Community participation in eye health and trachoma and the SAFE strategy

The latest issues of *Community Eye Health* (nos 31 and 32) discuss community participation in eye health (issue 31) and trachoma and the SAFE strategy (issue 32). For further information please contact *Community Eye Health*, International Centre for Eye Health, Institute of Ophthalmology, 11–43 Bath Street, London EC1V 9EL. (Tel: (+44) 171 608 6909/6910/6923; fax: (+44) 171 250 3207; email: [eyesource@ucl.ac.uk](mailto:eyesource@ucl.ac.uk)) Annual subscription £25. Free to workers in developing countries.

### Residents' Foreign Exchange Programme

Any resident interested in spending a period of up to one month in departments of ophthalmology in the Netherlands, Finland, Ireland, Germany, Denmark, France, Austria, or Portugal should apply to: Mr Robert Acheson, Secretary of the Foreign Exchange Committee, European Board of Ophthalmology, Institute of Ophthalmology, University College Dublin, 60 Eccles Street, Dublin 7, Ireland.

### International Strabismological Association

The International Strabismological Association (ISA) has established fellowships for training in strabismus and paediatric ophthalmology, supported by \$US 10 000 each. Further details: Secretary/Treasurer ISA, Derek T Sprunger, MD, Indiana University School of Medicine, 702 Rotary Circle, Indianapolis, Indiana 46202-5175, USA. The last day of application is 15 June 2000 (tel: (317) 274-1214; fax: (317) 274-1111).

### 13th Annual Meeting of German Ophthalmic Surgeons

The 13th annual meeting of German Ophthalmic Surgeons will be held on 15–18 June 2000 at the Meistersingerhalle, Nuremberg,

Germany. Further details: MCN Medizinische Congress-organisation Nuremberg AG, Zerbabelshofstrasse 29, D-90478 Nuremberg, Germany (tel: +49-911-3931621; fax: +49-911-3931620; email: [doerflinger@mcn-nuermberg.de](mailto:doerflinger@mcn-nuermberg.de)).

### XXXIV Nordic Congress of Ophthalmology

The XXXIV Nordic Congress of Ophthalmology will be held in Reykjavik, Iceland, 18–21 June 2000. This meeting celebrates the 100 year anniversary of the Nordic Ophthalmology Conference. Further details: Iceland Incentives Inc, Hamraborg 1–3, Is-Kopavogur, Iceland (tel: +354 554 1400; fax: +354 554 1472; email: [incentiv@itn.is](mailto:incentiv@itn.is)).

### III Modern Cataract and Refractive Surgery International Symposium

The III Modern Cataract and Refractive Surgery International Symposium will be held on 19–22 June 2000 at Banská Bystrica, Slovakia. Further details: Eye Clinic FD Roosevelt Hospital, Arm Gen L Svobodu Sq, 1, 975 17 Banská Bystrica, Slovakia (tel: 00421 88 413 4671; fax: 00421 88 413 2047).

### 6th Congress of the European Glaucoma Society

The 6th Congress of the European Glaucoma Society, millennium meeting 2000, will take place at the Royal Lancaster Hotel, London on 26–29 June 2000. Further details: Eurocongres Conference Management BV, Jan van Goyenkade 11, 1075 HP Amsterdam, Netherlands (tel: +31 20 679 34 11; fax: +31 20 673 73 06; email: [egs@eurocongres.com](mailto:egs@eurocongres.com)).

### British Ophthalmic Photographic Association

Forthcoming meetings of the British Ophthalmic Photographic Association are: 8 July 2000 at Southampton Eye Unit. Further details: Tim Mole (tel: 01703 798747). On 17–18 November BOPA annual conference at York. Further details: Mike Geall (tel: 0113 3923506).

### Joachim Kuhlmann Fellowship for Ophthalmologists 2000

The Joachim Kuhlmann AIDS Foundation, Essen, Germany, is sponsoring two fellowships per year for ophthalmologists at a well known institute, who want to train in CMV retinitis and other HIV related ophthalmological diseases. The fellowships are valued at \$US5000 each. Deadline for application is 31 July. Detailed applications, including CV and publication list, should be sent to the Joachim Kuhlmann AIDS Foundation, Bismarckstrasse 55, 45128 Essen, Germany (tel: 0201 87910-87; fax: 0201 87910-99; email: [jk-stiftung@t-online.de](mailto:jk-stiftung@t-online.de)).

### DR-2000, International Forum on Diabetic Retinopathy

The International Forum on Diabetic Retinopathy will take place on 7–9 September 2000 at the Palazzo Reale, Naples, Italy. Further details: Francesco Bandello, Congress Secretariat, MGR Congressi, Via Servio Tullio, 4, 20123 Milano, Italy (tel: 39 02 430071; fax: 39 02 48008471; email: [dr2000@mgr.it](mailto:dr2000@mgr.it)).

**VIII Tuebingen Angiography course**

The VIII Tuebingen Angiography course with wet lab will take place on 9 September 2000 in the auditorium, University Eye Clinic, Schleichstrasse 12, 72076 Tuebingen, Germany. Further details: WIT-Wissenstransfer, Universitat Tubingen (tel: ++49 7071-29 76439; fax: ++49 7071 29 5051; email: wit@uni-tuebingen.de/wit).

**30th Cambridge Ophthalmological Symposium**

The 30th Cambridge Ophthalmological Symposium entitled "The Ageing Macula" will be held on 13–15 September 2000 at St John's College Cambridge. Chairman: Professor Alan Bird. Further details: COS Secretariat, Cambridge Conferences, The Lawn, 33 Church Street, Great Shelford, Cambridge CB2 5EL (tel: 01223 847464; fax: 01223 847465; email: b.ashworth@easy.net.co.uk).

**European Association for Vision and Eye Research (EVER)**

The European Association for Vision and Eye Research (EVER) will be meeting on 4–7 October 2000 in Palma de Mallorca, Spain.

Further details: Secretariat EVER, Postbus 74, B3000 Leuven, Belgium (fax: +32 16 33 67 85; email: EVER@med.kuleuven.ac.be).

**Fifth Annual Meeting of the Association for Ocular Pharmacology and Therapeutics**

The Fifth Annual Meeting of the Association for Ocular Pharmacology and Therapeutics will be held on 2–5 November 2000 in Birmingham, AL, USA. Further details: Jimmy D Bartlett, OD, Department of Optometry, University of Alabama at Birmingham, 1716 University Blvd, Birmingham, AL 35294-0010, USA (tel: 205-934-6764; fax: 205-975-7052; email: jbartlett@icare.opt.uab.edu).

**12th Afro-Asian Congress of Ophthalmology**

The 12th Afro-Asian Congress of Ophthalmology (Official Congress for the Afro-Asian Council of Ophthalmology) will be held on 11–15 November 2000 in Guangzhou (Canton), China. The theme is "Advances of ophthalmology and the 21st century". Further details: Professor Lezheng Wu, Zhongshan Eye Center, SUMS, New Building, Room

919, 54 Xianlie Nan Road, Guangzhou 510060, PR China (tel: +86-20-8760 2402; fax: +86-20-8777 3370; email: lwuicv@gzsums.edu.cn).

**Singapore National Eye Centre 10th Anniversary International Congress**

The Singapore National Eye Centre 10th Anniversary International Congress will be held in conjunction with 3rd World Eye Surgeons Society International Meeting on 2–4 December 2000 at the Shangri-La Hotel, Singapore. Further details: The Organising Secretariat, 11 Third Hospital Avenue, Singapore 168751 (tel: (65) 2277255; fax: (65) 2277290; internet: www.sniec.com.sg).

**The Hong Kong Ophthalmological Symposium '00**

The Hong Kong Ophthalmological Symposium '00 will be held 4–5 December 2000, in Hong Kong, China. Further information: Miss Vicki Wong, Room 802, 8/F Hong Kong Academy of Medicine, 99 Wong Chuk Hang Road, Aberdeen, Hong Kong (tel: (852) 2761 9128; fax: (852) 2715 0089; email: cohk@netnavigator.com).

**Contributors please note:**

Communications from **all countries except the UK and Republic of Ireland** should be sent to Professor C Hoyt, Editor, *British Journal of Ophthalmology*, University of California, Department of Ophthalmology, 10 Kirkham Street, K 301, San Francisco, CA 94143-0730, USA (tel: 001 415 502-6871; fax: 001 415 514-1512).

Manuscripts from the **UK and the Republic of Ireland** should be sent to Professor Andrew Dick, UK Editor, *British Journal of Ophthalmology*, Division of Ophthalmology, University of Bristol, Lower Maudlin Street, Bristol BS1 2LX (tel: 0117 928-4827; fax: 0117 925-1421).



## Prophylactic scleral buckle for prevention of retinal detachment following vitrectomy for macular hole

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