PostScript

MAILBOX

Staining of the ILM in macular surgery

We read with interest the article by Li and colleagues about trypan blue staining of the vitreomacular interface during vitrectomy.¹ We congratulate the authors on their work. In particular, we appreciate their critical approach of testing trypan blue for staining of the internal limiting membrane (ILM) and epiretinal membrane (ERM) as well as their comments on potential untoward effects of indocyanine green (ICG) in macular surgery. We would like to comment on two remarks concerning the ultrastructural findings on the retinal side of the ILM following ILM removal with and without the use of ICG.

We agree with Li and colleagues that fragments of glial cells are commonly found in ILM specimens. Ultrastructurally, they appear as tiny fragments of Müller cell membranes adherent to and enclosed within the undulations of the retinal side of the ILM. These glial structures had been described in detail by Eckhardt and colleagues, and are in accordance with previous work of our group, in an investigation of the ultrastructure of the vitreomacular interface of 93 specimens in 91 consecutive patients with macular holes, epiretinal membranes, diffuse diabetic macular oedema, and vitreomacular traction syndrome without the use of indocyanine green or other dyes (unpublished data).²

We also agree with the authors, that the surgical technique and the underlying disease may influence the amount of glial structures adherent to the retinal side of the ILM, as these structures are predominantly found within undulations and folds of the ILM.^{3,4} However, we would like to emphasise the effect of ICG in this context.

Firstly, there are obvious differences between ILM specimens removed with and without the use of ICG not only in terms of quantity of glial structures but in terms of quality. A continuous layer of cell membranes, undetermined cellular debris, and entire footplates of Müller cells were commonly observed following ICG assisted peeling of the ILM, whereas such structures had never been found in the series of 93 unstained specimens described above.⁵

Secondly, all stained and unstained specimens having been investigated by electron microscopy were removed by one experienced surgeon (AK). Beside the use of ICG, there was no change of the surgical technique. Moreover, retinal elements as described above were not found before the introduction of the dye at our institution in September 2000, nor after having stopped ICG staining in April 2001.

Thirdly, in an experimental setting in human donor eyes published recently, retinal structures adherent to the undulating side of the ILM as described above could be found following the application of ICG to the

macula only.⁶ No attempt of peeling or any other mechanical approach to the vitreomacular interface was made in these eyes. However, the ILM was detached from the macula. Retinal elements were adherent to the retinal side of the ILM showing an identical morphology like those obtained during vitrectomy with ICG assisted ILM removal.⁶

Therefore, in our experience there is increasing evidence that at least some commonly used preparations of ICG may affect the ultrastructure of the inner retina, and are primarily responsible for obvious differences in the ultrastructure of the surgically removed ILM. ILM removal by itself results in removal of tiny fragments of Müller cell membranes. Their morphological and functional implications for the macula remain unknown.

Finally, we would like to encourage the authors to follow their promising approach of staining the ILM and ERM with trypan blue. In our institution, single specimens which had been stained and peeled using trypan blue revealed no evidence of retinal damage (submitted data).

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Authors' reply

We wish to thank Gandorfer and colleagues for their interest in our paper¹ and for the

kind comments and encouragement with regard to our work. Certainly, these correspondents are compiling evidence concerning the effect of indocyanine green (ICG) on the retina in both their published and unpublished studies.^{2,3}

In our report, we restricted our comments regarding retinal damage and dye usage to the specimens wherein an epiretinal membrane (ERM) was present.¹ Evidence of retinal damage was observed in four of these five specimens, mostly in the form of neural and glial elements adherent to the retinal side of the inner limiting membrane (ILM). The apparent lack of such elements in some ERM specimens may reflect partial separation of the ILM due to traction from the membrane before surgery.⁴ Nevertheless, in one of our specimens a substantial fragment of neuroretina was also present.¹ We have, indeed, long considered such fragments as potential confounding factors in immunohistochemical studies of surgically excised ERMs.^{5,6} Since they are present in ERMs removed without the use of dye, we cannot blame their presence on these surgical aids. Perhaps these fragments are avulsed as a result of enhanced adhesion between the ERM and retina via glial anchorage sites running through dehiscence in the ILM.⁵ It is clear that our investigation does not exclude an effect of ICG on the retina^{2,3} and we wholeheartedly agree with Gandorfer and coworkers that agents such as trypan blue warrant further evaluation as aids to ERM and ILM peeling.

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NOTICES

Elimination of avoidable blindness

The latest issue of *Community Eye Health* (No 46) discusses the resolution of the World Health assembly on the elimination of avoidable blindness. For further information please contact: Journal of Community Eye Health, International Resource Centre, International Centre for Eye Health, Department of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, Keppel Street, London WC1E 7HT, UK (tel: +44 (0)20 7612 7964; email: Anita.Shah@lshtm.ac.uk; website: www.jceh.co.uk). Annual subscription (4 issues) UK 28/US\$45. Free to developing country applicants.

Second sight

Second Sight, a UK based charity whose aims are to eliminate the backlog of cataract blind in India by the year 2020 and to establish strong links between Indian and British ophthalmologists, is regularly sending volunteer surgeons to India. Details can be found at the charity's website (www.secondsight.org.uk) or by contacting Dr Lucy Mathen (lucymathen@yahoo.com).

Specific Eye ConditionS (SPECS)

Specific Eye ConditionS (SPECS) is a not for profit organisation which acts as an umbrella organisation for support groups of any conditions or syndrome with an integral eye disorder. SPECS represents over 50 different organisations related to eye disorders ranging from conditions that are relatively common to very rare syndromes. The website acts as a portal giving direct access to support groups' own websites. The SPECS web page is a valuable resource for professionals and may also be of interest to people with a visual impairment or who are blind. For further details about SPECS, contact: Kay Parkinson, SPECS Development Officer (tel: +44 (0)1803 524238; email: k@eyeconditions.org.uk; website: www.eyeconditions.org.uk).

The British Retinitis Pigmentosa Society

The British Retinitis Pigmentosa Society (BRPS) was formed in 1975 to bring together people with retinitis pigmentosa and their families. The principle aims of BRPS are to raise funds to support the programme of medical research into an eventual cure for this hereditary disease, and through the BRPS welfare service, help members and their families cope with the everyday concerns caused by retinitis pigmentosa. Part of the welfare service is the telephone help line (+44 (0)1280 860 363) for any queries relating to retinitis pigmentosa, especially for those recently diagnosed with retinitis pigmentosa (tel: +44 (0)1280 821 334; email: lynda@brps.demon.co.uk; website: www.brps.demon.co.uk).

Surgical Eye Expeditions International

Volunteer ophthalmologists in active surgical practice are needed to participate in short

term, sight restoring eye surgery clinics around the world. Contact: Harry S Brown, Surgical Eye Expeditions International, 27 East De La Guerra, C-2, Santa Barbara, CA 93101-9858, USA (tel: +805 963 3303; fax: +805 965 3564; email: hsbrown.md@cox.net or seeintl@seeintl.org; website: www.seeintl.org).

Rise in organ transplant numbers

According to UK Transplant, the UK has seen the highest number of organ transplants in six years. Last year (1 April 2002 to 31 March 2003), 2777 patients had their lives saved or dramatically improved through the generosity of 1064 donors. This equated to a 6% increase compared to the previous 12 months (1 April 2001 to 31 March 2002). Furthermore, during 2002-3, the highest number of people benefited from a cornea transplant for five years (1997-98) and 240 more people had their sight restored than the previous year. For further information see UK Transplant's website (www.uktransplant.org.uk).

Elimination of avoidable blindness

The 56th World Health Assembly (WHA) considered the report on the elimination of avoidable blindness (doc A56/26) and urged Member States to: (1) Commit themselves to supporting the Global Initiative for the Elimination of Avoidable Blindness by setting up a national Vision 2020 plan by 2005; (2) Establish a national coordinating committee for Vision 2020, or a national blindness prevention committee to help implement the plan; (3) Implement the plan by 2007; (4) Include effective monitoring and evaluation of the plan with the aim of showing a reduction in the magnitude of avoidable blindness by 2010; (5) To support the mobilisation of resources for eliminating avoidable blindness. The WHA also urged the Director-General to maintain and strengthen WHO's collaboration with Member States and the partners of the Global Initiative for the Elimination of Avoidable Blindness as well as aid in the coordination and support of national capability.

Detachment course with international faculty on: retinal and vitreous surgery with case presentations preceding the annual meeting of Iranian Society of Ophthalmology

The detachment course with international faculty on: Retinal and Vitreous Surgery with Case Presentations preceding the Annual Meeting of Iranian Society of Ophthalmology will be held on 29-30 November 2003 and 1-4 December 2003 respectively, at the Razi Conference Center, Hemmat Hyw, Tehran, Iran. Further details: Scientific programme: Prof Ingrid Kreissig, University of Tuebingen, Schleichstr. 12, Breuningerbau, 72076 Tuebingen, Germany (tel: +49 7071 295209; email: ingrid.kreissig@med.uni-tuebingen.de). Local organisation: Dr Arman Mashehkh, Dr Siamak Moradian, Dept of Ophthalmology, Labbanfinejad Medical Center, Pasdaran Ave, Boostan 9, Tehran, 16666, Iran (fax: +98 21 254 9039; email: labbafi@hotmail.com).

5th International Symposium on Ocular Pharmacology and Therapeutics (ISOPT)

The 5th International Symposium on Ocular Pharmacology and Therapeutics (ISOPT) will take place 11-14 March 2004, in Monte Carlo, Monaco. Please visit our website for details of the scientific programme, registration, and accommodation. To receive a copy of the Call for Abstracts and registration brochure, please submit your full mailing details to <http://www.kenes.com/isopt/interest.htm>. Further details: ISOPT Secretariat (website: www.kenes.com/isopt).

XVth Meeting of the International Neuro-Ophthalmology Society

The XVth Meeting of the International Neuro-Ophthalmology Society will take place 18-22 July 2004, in Geneva, Switzerland. Further details: Prof. A Safran, University Hospital Geneva, c/o SYMPORG SA, Geneva (fax: +4122 839 8484; email: info@symporg.ch; website: www.symporg.ch).

4th International Congress on Autoimmunity

The 4th International Congress on Autoimmunity will take place 3-7 November 2004 in Budapest, Hungary. The deadline for the receipt of abstracts is 20 June 2004. Further details: Kenes International Global Congress Organisers and Association Management Services, 17 Rue du Cendrier, PO Box 1726, CH-1211 Geneva 1, Switzerland (tel: +41 22 908 0488; fax: +41 22 732 2850; email: autoim04@kenes.com; website: www.kenes.com/autoim2004).

14th Meeting of the EASD Eye Complication study group

The 14th Meeting of the EASD Eye Complication (EASDEC) study group will take place on the 21-23 May 2004. There will be key lecture notes on the following topics: Peter Gaede (Denmark)—Results of the Steno 2 study, Hans Peter Hammes (Germany)—Animal models of diabetic retinopathy, Massimo Porta (Italy)—Screening with the London protocols: 12 years after, and Anselm Kampik (Germany)—Surgical options in diabetic retinopathy. There will also be case presentations and oral and poster presentations. The EASDEC board comprises F Bandello (President), PJ Guillausseau (Vice President), C-D Agardh (Past President), P Massin (Secretary), M Porta (Treasurer). The Scientific and Organizing Committee includes: F Bandello, PJ Guillausseau, P Massin, C-D Agardh, M Porta, A Kampik, M Ulbig, and G Lang. There are three travel grants available, at 1000 Euro each, for young scientists (less than 35 years at the time of the meeting). Application for the grant should be made together with the submission of the abstract. For further information, contact: Department of Ophthalmology, Ingrid Mannl, Ludwig-Maximilians-University, Mathildenstr. 8, 80336 MÜNICH, Germany (tel: +49-89-5160-3800; fax: +49-89-5160-4778; e-mail: casdec@ak-i.med.uni-muenchen.de). The deadline for abstracts is 2 March 2004.