glaucoma and one hopes that appropriate histological investigations will clarify these issues in the future.

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- 1 Chaturvedi N, Hedley-Whyte ET, Dreyer EB. Lateral geniculate nucleus in glaucoma. *Am J Ophthalmol* 1993; 116: 182-8.
- 2 Matthews MR. Further observations on trans-neuronal degeneration in the lateral geniculate nucleus of the macaque monkey. *J Anat* 1964; 98: 255-63.
- 3 Goldby F. A note of transneuronal atrophy in the human lateral geniculate body. *J Neurol Neurosurg Psychiatry* 1957; 20: 202-7.
- 4 Casson EJ, Johnson CA, Shapiro L. Longitudinal comparison of temporal modulation perimetry with white on white and blue on yellow perimetry in ocular hypertension and early glaucoma. *J Opt Soc Am* 1993; 10: 1792-806.

Paecilomyces keratitis

EDITOR,—The successful treatment of a *Paecilomyces* keratitis described by Mizunoya and Watanabe¹ raises a number of important issues. *Paecilomyces* as a cause of deep keratitis has been reported in a series² of cases to which now a further two cases have been added. As described in this article, medical treatment is rarely successful and the only cases in which the patients were able to maintain an eye was when surgical extirpation of the corneal infection was undertaken. The lesion as depicted in Figure 1C, would have lent itself to a large eccentric corneal patch graft despite the authors' concerns about approaching the limbus at the 6 o'clock position. Although there was an apparent beneficial effect of pulling a conjunctival flap over a perforated cornea, the predictable result of secondary glaucoma from loss of the angle resulted. This sequela is far less acceptable than a possible corneal graft rejection from an eccentric graft. I believe the authors were exceptionally lucky to maintain an eye with some vision. The suggestion that a conjunctival flap is an appropriate method of treatment in a perforated cornea may lead readers to emulate this treatment which will result in many disasters of continuing infection and secondary glaucoma. The use of large corneoscleral grafts³ despite their many associated problems, would be a preferable method of treatment, both in eradicating the disease and maintaining a relatively normal angle anatomy, than covering an active infection and a large perforation with conjunctiva.

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- 1 Mizunoya S, Watanabe Y. *Paecilomyces* keratitis with corneal perforation salvaged by a conjunctival flap and delayed keratoplasty. *Br J Ophthalmol* 1994; 78: 157-8.
- 2 Hirst LW, Sebban A, Whitby RM, Nimmo GR, Stallard K. Non-traumatic mycotic keratitis. *Eye* 1992; 6: 391-5.
- 3 Cobo M, Ortiz JR, Safran G. Sclerokeratoplasty with maintenance of the angle. *Am J Ophthalmol* 1992; 113: 533-7.

Reply

EDITOR,—We appreciate the comment of Hirst concerning our case report. We agree

that treating corneal defect by sclerokeratoplasty improved by Cobo *et al*¹ will prevent secondary angle closure glaucoma. However, the sclerokeratoplasty has the following problems. Firstly, because in this method a 1 to 2 mm peripheral corneal lip is left in the recipient's eye, when the lesion is close to the limbus as our case, fungi may remain in the lip. Secondly, a very high incidence of graft rejection necessitates repeated keratoplasty, which is difficult to do in Japan where donor corneal grafts are few in number. We regret that in our case anterior segment reconstruction² at the time of secondary keratoplasty was not enough. If it had been done thoroughly, trabeculectomy might have been unnecessary.

Keratomycosis with perforation is a very severe condition, and there is no reliable treatment to salvage an eye. We would select primary keratoplasty, sclerokeratoplasty or the method we reported according to the position of the perforation, the size of it, and the activity of the lesion.

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- 1 Cobo M, Ortiz JR, Safran SG. Sclerokeratoplasty with maintenance of the angle. *Am J Ophthalmol* 1992; 113: 533-7.
- 2 Hersh PS, Kenyon KR. Anterior segment reconstruction following ocular trauma. In: Shingleton BJ, Hersh PS, Kenyon KR, eds. *Eye trauma*. St Louis: Mosby, 1991: 175-84.

Could colour vision tests predict or find retinopathy in diabetic schoolchildren?

EDITOR,—Only a few studies concerning colour vision of diabetic children are available.¹⁻³ In them, colour vision has been found to be normal, and a follow up study of diabetic children and young adults showed that colour vision (examined with the Farnsworth-Munsell 100 hue test) deteriorated with the development of retinopathy, but not before.⁴ Distinguishing retinopathic eyes from those without retinopathy has not been studied with colour vision tests in this age group.

We have observed colour vision of diabetic schoolchildren with healthy eyes during 6 years, from 1987 to 1993. Answers for two questions were sought: (1) Would the results of colour vision tests in diabetic children without retinopathy in 1987 predict the development of retinopathy during the next 6 years? (2) Would the results of colour vision tests in 1993 distinguish the eyes with retinopathy from those without retinopathy?

(1) *The follow up study 1987-1993.* In 1987 colour vision of 54 diabetic schoolchildren with healthy eyes was studied (29 girls, 25 boys; aged 9-19 years (mean 14 (2 SD) years); duration of diabetes from 1 month to 15 years, mean 6 (4) years. Colour vision was examined with the Farnsworth panel D 15, Lanthony desaturated panel, and Nagel I anomaloscope. The panel D 15 was correctly interpreted by all of the children. In the desaturated panel, seven children did not pass the test showing 1-3 tritan confusion lines. In the Nagel anomaloscope examination, normal anomalous quotients (AQ, from 0.7 to 1.2) and normal matching ranges (MR, from 0 to 5) were observed in all children. Fifty six eyes had an MR completely on the red side of the Rayleigh equation. (The predictive value of the red side MR for the appearance of retinopathy has been suggested.)

In 1993, 23 of the children (35 eyes) had retinopathy, which in 33 eyes was background retinopathy. None of these eyes had macular involvement. Only one patient had proliferative retinopathy with macular oedema in both eyes. Of those seven children who did not pass the desaturated panel test in 1987, only two developed background retinopathy in one eye. However, all these seven children passed the desaturated panel in 1993. The patient with proliferative retinopathy passed the test normally in 1987. Of the 56 eyes with a red side MR in 1987, 16 (29%) had developed background retinopathy, 40 eyes still had intact retinas. Of the 52 eyes with a green side or mixed red-green side MR, 19 (17 background and two proliferative, 37%) had developed retinopathy, 33 eyes had intact retinas.

(2) *The cross sectional study 1993.* In addition to the above mentioned colour vision tests, the blue equation of another anomaloscope: colour vision meter (CVM) 712 was used. Fifty three of the patients passed both the panel D 15 test and the desaturated panel test. Only the 23-year-old man with proliferative retinopathy and macular oedema in both eyes could not correctly interpret the panel D 15 test; he made four tritan confusion lines in both eyes. The desaturated panel was impossible for him to work. In the Nagel anomaloscope and CVM, there were no significant differences in the results of AQs or MRs between the retinopathy and non-retinopathy group. The Nagel anomaloscope results, AQs and MRs, were all within normal limits. In the CVM, four diabetic patients (four eyes) had an abnormal AQ, >1.4. One of the eyes had no retinopathy, two eyes had background retinopathy, and one eye had proliferative retinopathy. All the other 31 eyes with retinopathy (one of them with proliferative retinopathy) had AQs within normal limits. Ten of the retinopathic eyes showed an abnormal MR in the CVM, from 11 to 26, mean 18 (5). Also 10 non-retinopathic eyes had an abnormal MR, from 11 to 21, mean 15 (3). No significant difference was found between these means.

Conclusion. The 6 year follow up study in colour vision of diabetic schoolchildren showed that no predictive signs for retinopathy could be found with the panel D 15, desaturated panel or Nagel I anomaloscope test results. In the cross sectional study, it was observed that the eyes with and without retinopathy in diabetic schoolchildren and young adults could not be distinguished from each other with the results of four colour vision tests: panel D 15, desaturated panel, Nagel I anomaloscope, and colour vision meter 712 (blue equation). Only the two eyes with advanced proliferative retinopathy with macular oedema could be found with the panel D 15 test.

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- 1 Bronte-Stewart JM, Cant JS, Craig JO. The detection of early visual loss in young diabetics. *Proc Roy Soc Med* 1970; 63: 786-8.
- 2 Mäntyjärvi MI, Nousiainen IST, Myöhänen T. Color vision in diabetic school children. *J Pediatr Ophthalmol Strabismus* 1988; 25: 244-8.
- 3 Spafford MM, Lovasik JV. Clinical evaluation of ocular and visual functions in insulin-dependent juvenile diabetics. *Am J Optom Physiol Opt* 1986; 63: 505-19.

4 Bronte-Stewart JM, Cant JS, Craig JO. Colour vision in young diabetics. In: Verriest G, ed. *Colour vision deficiencies VII. Doc Ophthalmol Proc Ser 39*. The Hague: Dr W Junk Publishers, 1984: 377-81.

BOOK REVIEW

Atlas of Clinical Ophthalmology. 2nd ed. By David J Spalton, Roger A Hitchings, Paul A Hunter. Pp 568. £99. London: Times Mirror, 1993.

What can one say about the second edition of this excellent atlas that has not been said before? It is a masterly work which, in the modern parlance, is user friendly at least as far as reading it is concerned – it does not fit easily into the pocket or a handbag and is rather too heavy for bedtime reading!

The book is beautifully illustrated with copious diagrams (over 240) as well as photographs (over 1000 colour and 400 black and white) of very high quality. The colour reproduction is of a very high standard and the publishers are to be congratulated on achieving this notoriously difficult task.

The text is simply and clearly written and balances finely the number of photographs. The sections are well laid out and usefully divided if perhaps showing a little bias towards the main authors' interests.

There is a short list of additional contributors which helps give balance to the overall work. This reviewer feels no need to be prolix about the atlas. It is excellent value whatever the cost. It is a beautiful book.

COLIN M KIRKNESS

NOTICES

Glaucoma Group

DAVID COLE TRAVEL FELLOWSHIP

The David Cole Travel Fellowship, instituted by Merck Sharp & Dohme in memory of Professor David Cole, will assist a visit to a hospital or research centre during the academic year starting 1 October 1995. The award will be equivalent to £2000. The purpose of the award is to enable the successful applicant to gain experience and knowledge in pursuit of a specific project related to glaucoma.

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.

The Guide Dogs for the Blind Association

An ophthalmic research symposium will be held on Thursday 13 July 1995 at The Royal Society of Medicine, 1 Wimpole Street, London. The conference will discuss current clinical and basic research into uveoretinitis and diabetic retinopathy. Further details: Miss Clare J Thompson, R&D Project Manager, The Guide Dogs for the Blind Association, Hillfields, Burghfield, Reading RG7 3YG. (Tel: 01734 835555; Fax: 01734 835211.)

San Diego Eye Bank

The San Diego Eye Bank is holding its 15th annual current concepts in ophthalmology conference on 11-13 August 1995 at the San Diego Princess Resort. Further details: Britta A Sullaway, Public Relations, San Diego Eye Bank, 3702 Ruffin Road, Suite 100, San Diego, CA 92123, USA. (Tel: (619) 694-0444; Fax: (619) 694-0581.)

The 21st International Pupil Colloquium

The 21st International Pupil Colloquium will be held from 29 August to 2 September 1995 at Schloss Haigerloch, Tübingen, Germany. For further details: Helmut Wilhelm, University Eye Hospital, Department of

Pathophysiology of Vision and Neuro-Ophthalmology, D-72076 Tübingen, Germany. (Tel: +497071 294786; Fax: +497071 295038.)

European Strabismological Association

The 22nd meeting of the European Strabismological Association (ESA) will be held in St John's College, Cambridge, UK on 6-8 September 1995. Application papers, including abstract forms, can be obtained from: Mr J S Elston, MD, FRCS, Oxford Eye Hospital, Radcliffe Infirmary, Woodstock Road, Oxford OX2 6HE, UK.

X Tübingen Detachment Course: Retinal and Vitreous Surgery

The X Tübingen Detachment Course on retinal and vitreous surgery will be held on 16-17 September 1995 at Jekaterinburg (Ekaterinburg), Russia.

Further details: Professor Khristo P Takhchidi, IRTC 'Eye Microsurgery', Ekaterinburg Center, Bardin Strasse, 4a, 620149 Ekaterinburg, Russia. (Tel: 007 3432 286292; Fax: 007 3432 283370.) Or Office Professor Kreissig, MD, Univ Augenklinik, Schleissstrasse 12, 72076 Tübingen, Germany. (Tel: 07071 294758; Fax: 07071 293746.)

Care of the Elderly

A conference entitled 'Eye disease in the elderly: assessment, treatment and rehabilitation' will be held on 22 September 1995 at the Forte Crest Hotel, Birmingham, UK. Further details: Deborah Gardner, Conference Office, 4 Little Essex Street, London WC2R 3LF. (Tel: 0171-836 6633; Fax: 0171-379 4202.)

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