LETTERS TO THE EDITOR

Sir William Bowman

EDITOR,—The recent editorial on Sir William Bowman¹ leads to two points worthy of mention, for their continuing relevance to medicine today.

Firstly, it seems that no one completes a distinguished medical career without some dispute and William Bowman was no different in this respect. Argument arose over Bowman's discovery of the essentially muscular nature of the 'ciliary membrane' in 1823, as a paper on the same subject had been presented a year previously by Robert Knox—he of the infamous connection with Burke and Hare (who were hanged for the crime of murdering vagrants to procure corpses for dissection).

Knox's paper included study of the ciliary muscle in vultures, in which it was very strong, in horses and deer, in which it was less marked, and in fishes, in which it was rudimentary. Apparently his association with Burke and Hare had turned him away from human anatomical study for a while, but in any case the debate over whether the credit was due to Bowman or Knox continued for years.²

Another salutary point is Bowman's example of fostering good medical nursing relations. Florence Nightingale's initial crusade was for better standards of nursing in Britain, since nurses of the time were often drunk on duty and tended to combine their duties with prostitution.³

Bowman, impressed with her assistance at a difficult operation, became her 'mentor' and offered her the chance to re-organise nurse training at King's College Hospital. Although this never came about, owing to Miss Nightingale leaving for the Crimean war, the example of interdisciplinary cooperation is one we could probably learn from today.

F S ROMAN
Department of Biomedical Science,
Sheffield University

- 1 Trevor-Roper P. Sir William Bowman – 1816–1892. *Br J Ophthalmol* 1992; 76: 129.
- 2 Cope Z. *Sidelight on the history of medicine*. London: Butterworth, 1957, 185–7.
- 3 Woodham-Smith C. *Florence Nightingale*. London: Constable, 1950, 58 and 125–7.

Acyclovir in herpes zoster ophthalmicus

EDITOR,—I read with great interest the article by Marsh and Cooper.¹ Herpes zoster ophthalmicus (HZO) is indeed a serious illness, often characterised by severe ocular complications. Better knowledge on how to manage HZO complications by properly designed studies, such as the one by Marsh and Cooper, is therefore highly desirable. However, when dealing with HZO it is extremely important to distinguish between two different situations: acute HZO (a skin rash of equal or less than 3 days' duration) and late (subacute or chronic) HZO (with a rash of more than 3 days' duration), as the therapies differ radically. In the study by Marsh and Cooper we are clearly in the second situation of late HZO, as patients were included up to 3 weeks after the skin rash had appeared. It is interesting to note that the results of the study confirm the prevailing

clinical impression that steroids are (most of the time) indispensable for treatment of ocular inflammatory complications of HZO when it was not treated with systemic acyclovir (ACV) in the acute phase. The currently admitted rationale is, as the authors state, that inflammation is probably produced by antigenic changes of damaged tissue and not by viral replication.

The situation is however completely different in acute HZO where active viral replication is at the origin of disease morbidity. Moreover, the strong antibody response seen in HZO indicates that it is not a purely ocular phenomenon but has a systemic component, probably because varicella zoster virus (VZV) also spreads along perineural and perivascular pathways.² It is therefore reasonable to administer systemic ACV which, at the oral dose of 800 mg five times daily, is known to inhibit replication of most VZV strains.³

We showed in a series of 48 patients, treated with adequate doses of oral ACV within 3 days of skin eruption, that no patient went on to a chronic course or needed steroid therapy within a minimum follow-up period of 2 years.² We further showed that, if only topical or inadequate systemic doses of ACV were given, the rate of serious ocular complications or chronic evolutions tended to be equal to the pre-ACV rate of plus or minus 20%.⁴ The body of clinical evidence presently available, indicating that systemic doses of ACV given within 3 days of skin eruption prevent serious ocular complications, is so patent that, on an ethical base, no patient should at present be denied such treatment.^{5–7} The financial implications of routine ACV therapy for all cases of acute HZO are not to be minimised. However it is far from certain that the health cost of HZO will be cheaper if the decision is made not to treat systemically. We found that the average treatment duration and average number of visits of the group of adequately treated acute HZO patients was respectively 23 days and 5.5 visits, whereas it was 90 days and 10.1 visits in a group of patients having received only topical or inadequate systemic ACV (late treatment or insufficient doses). If prolonged therapy, prolonged medical care, and job absenteeism are taken together, routine systemic ACV therapy might well be more cost efficient.

CARL P HERBERT
Hôpital Ophtalmique Jules Gonin,
Department of Ophthalmology,
University of Lausanne,
15, Ave de France, CH-1004 Lausanne,
Switzerland

- 1 Marsh RJ, Cooper M. Double-masked trial of topical acyclovir and steroids in the treatment of herpes zoster ocular inflammation. *Br J Ophthalmol* 1991; 75: 542–6.
- 2 Herbert CP, Büchi ER, Piguet B, Zografos L, Fitting P. High-dose oral acyclovir in acute herpes zoster ophthalmicus: the end of the corticosteroid era. *Curr Eye Res* 1991; 10 (suppl): 171–5.
- 3 Liesegang TJ. Diagnosis and therapy of herpes zoster ophthalmicus. *Ophthalmology* 1991; 98: 1216–29.
- 4 Borruat FX, Büchi ER, Piguet B, Fitting P, Zografos L, Herbert CP. Prevention of severe ocular complications by adequate acyclovir therapy. *Klin Monatsbl Augenheilkd* 1991; 198: 358–60.
- 5 Cobo LM, Foulks GN, Liesegang TJ, Lass J, Sutphin JE, Wilhelmus K, et al. Oral acyclovir in the treatment of acute herpes zoster ophthalmicus. *Ophthalmology* 1986; 93: 763–70.
- 6 Hoang-Xuan T, Büchi ER, Herbert CP, Denis J, Frot P, Thenault S, et al. Oral acyclovir for herpes zoster ophthalmicus. *Ophthalmology* 1991; 98 (Suppl): 155.
- 7 McGill J, MacDonald DR, Fall C, McKendrick GDW, Copplestone A. Intravenous acyclovir in acute herpes zoster infection. *J Infect* 1983; 6: 157–61.

- 8 Harding SP, Porter SM. Oral acyclovir in herpes zoster ophthalmicus. *Curr Eye Res* 1991; 10 (Suppl): 177–82.

Reply

EDITOR,—We were interested to read Dr Herbert's letter. Whilst we agree about the importance of delivering effective systemic antivirals at the start of the disease, it is very seldom possible to do so. The vast majority of patients present to doctors when the rash is established and viral replication has been going for at least 5 days and has scattered throughout the tissues of the dermatome involved. Therefore most patients have secondary inflammatory complications at presentation. As far as the efficacy of systemic acyclovir is concerned, we are aware at present of only one controlled trial with administration of systemic acyclovir within the first 72 hours which claims a reduced instance of ocular complications.¹ The remaining series of reports are a mixture of prospective and retrospective results and are not double blind and controlled. We still feel that it is necessary to have another blind controlled trial with random selection of patients within 72 hours of the onset of pain with no exclusion of those with ocular complications at presentation (which occurred in the Cobo series).

RONALD J MARSH
Department of Clinical Ophthalmology,
Moorfields Eye Hospital,
City Road, London EC1V 2PD

- 1 Cobo LM, Foulks GN, Liesegang TJ, Lass J, Sutphin JE, Wilhelmus K, et al. Oral acyclovir in the treatment of acute herpes zoster ophthalmicus. *Ophthalmology* 1986; 93: 763–70.

BOOK REVIEWS

Developments in Ophthalmology, Vol 19. Ultrastructure of the Conjunctival Epithelium. By Klaus-Peter Steuhl. Pp 104. £40.00. Karger: Basel, Switzerland, 1989.

Recognition of the importance of the conjunctiva and Tenon's capsule in ocular disease and wound healing is increasing. As knowledge of conjunctival anatomy and physiology grows an understanding of its pathology becomes clearer. It is the surface epithelium of the conjunctiva (and cornea) which is first exposed to external factors within the precorneal tear film. It also has a role in synthesising components of the precorneal tear film and thus both affects and is affected by the tear film. A detailed study of the conjunctival epithelium is therefore fully justified and is well presented in an organised fashion in this book.

The author sets out to explain the morphological significance of known and proposed functions of the conjunctival epithelium. In the introduction he provides a brief but well referenced synopsis on conjunctival/tear film structure and function. In contrast the chapter on materials and methods, although comprehensive, is of little direct interest to the general ophthalmologist. Most of the book is devoted to the results of the author's morphological study of both animal and human tissue. This is well illustrated with electron and light micrographs. A classification of five surface epithelial

cell types, based on ultrastructure, is proposed for the first time. This may prove to be an overclassification but is difficult to criticise on the evidence presented. Regional and age-related differences in the distribution of these cell types are thoroughly investigated as are changes in the epithelial ultrastructure in Sjögren's syndrome, after lime burns, and following chronic treatment with topical anti-glaucoma drugs. The studies on pathological tissue can be criticised since only small numbers are investigated but this should not detract from their interest. Conjunctival resorption processes and corneal re-epithelialisation are also explored. The discussion is well documented and relates the morphological findings to function and pathological processes.

In summary this is an interesting piece of work, highly detailed, but also highly specialised. This makes it an important volume for the researcher or specialist with an interest in the conjunctiva but it is of less relevance to the general ophthalmologist.

DAVID BROADWAY

Cataract Surgery: Alternative Small-Incision Techniques. Edited by George W Rozskis. Pp 194. £76.50. Slack: Beckenham, Kent. 1990.

This is a most interesting book which is clearly written and well illustrated with numerous step-by-step drawings. It comes with the added bonus of a videotape showing each author's particular procedure.

The main purpose of the book is to show how cataracts may be removed through small posteriorly placed incisions which minimise astigmatism without resorting to phako-emulsification and thus avoid the drawbacks of learning curve, expense, and reliance on mechanisation.

The first chapter deals with a review of the causes of astigmatism and the rationale and techniques for a scleral pocket incision with a good discussion of the pros and cons, mentioning relevant complications and their avoidance.

There are three chapters devoted to removal of the nucleus, either by traction in which it moulds through the section, or after division into two fragments by a guillotine action of two instruments or division by a small snare: the fragments are then removed with a modified loop or forceps.

There is a chapter on hydrodelineation of the nucleus whereby the nucleus is fragmented by hydrodissection into multiple concentric rings. For anything other than relatively soft lenses, ultrasonic assistance is required to enable the 29 gauge cannula to pass through the lens.

Another chapter describes utilisation of partial phako-emulsification with extraction of nuclear fragments through a small section using instruments or pushing them out on a wave of viscoelastic.

As with any other book, there are parts which are more instructive, better reasoned and more interesting than others, but all in all it is a most interesting package of book and video. Both are complementary as a 'picture is worth a

thousand words' but the text is required to explain the whys and wherefores of the procedure.

J JAGGER

A Text and Atlas of Strabismus Surgery. By Renée Richards. Pp 226. £75.00. Chapman and Hall: London, 1991.

This book, in the Chapman and Hall *Medical Atlas* series, is, as the title indicates, an attempt to combine a didactic text with an illustrated account of strabismus surgery. We are assured by the text on the rear cover that the book 'describes principles, indications, and techniques of surgery on the extraocular [*sic*] muscles'. We are further assured that 'actual techniques' are included and that the combination of text and illustrations 'targets readership at residents and graduates in ophthalmology'.

Dr Richards practises in New York but the book appears to use English spellings where they differ from the American form, for example anaesthesia, anaemia. In contrast to this, standard English definitions such as that for consecutive exotropia are not used. Dr Richards also uses an unusual form of English which this reviewer found disconcerting. Wherever the concept of 'yoke muscles' (that is – a pair of synergists pulling together in the fashion of oxen or horses yoked together) is raised the text uses the spelling 'yolk'. On page 74 there is reference to patients with Brown's syndrome adopting a 'vicarious head position.' My dictionary defines vicarious as meaning 'done on behalf of another.' On page 75 we are introduced to 'trebaces' between the superior oblique tendon and its hypothetical sheath. On page 138 the eye is said to 'tort' under general anaesthesia. Prosthetic plates inserted at surgery for blow-out fracture are said to undergo 'extension' rather than extrusion. Over and above this the standard of proofreading is low and spelling errors are common. Figures 8.10 and 8.12 have their legends exchanged.

All this is rather a pity because where Dr Richards talks about management she is generally quite sound. The sections on sixth nerve palsy, Duane's syndrome and the timing of surgery for congenital esotropia are all clear and to the point. There is a good section on anaesthesia by Dr J T Herbert. The illustrations are generally good although unnecessarily copious. I do not believe that it takes 12 pictures to illustrate a limbal conjunctival incision (Fig 1.5, page 10).

The greatest problem, however, is that the book tries to be at the same time a textbook of strabismus surgery and a manual of 'how to do it,' apparently aimed at someone who has never been in an operating theatre. Nearly an entire chapter is devoted to skin cleaning and draping of the patient prior to surgery. Exhaustive descriptions are given of how to hold a needle and pass it through sclera. The suggested set of instruments for squint surgery includes no fewer than seven muscle hooks.

Finally, there are a number of points on which I would disagree with Dr Richards. I do

not think parents should be kept away from the anaesthetic induction area (page 8). In most cases parents and children seem to benefit from staying together until the child is unconscious. In the section on superior oblique tuck (page 42) measurements are given for tuck amounts irrespective of the operative findings and there is no mention of the peroperative traction test popularised by Saunders and used by most surgeons to avoid a disabling secondary Brown's syndrome postoperatively. The useful technique of selective tenotomy at the superior oblique insertion is not mentioned.

In the section on the management of dysthyroid eye disease (page 79) it is suggested that where tethering of medial and inferior recti coexist they should not be dealt with at the same time. I can find no reference to methods of charting fields of diplopia in the follow-up of patients with incomitant squint. On page 138 it is suggested that all scleral sutures that appear to perforate the eye wall should be treated with prophylactic cryotherapy, if necessary by calling in a retinal surgeon to do this. This seems excessive.

In short, despite its evident good intentions, I cannot recommend this book to surgeons in training.

J P LEE

All titles reviewed here are available from the BMJ Bookshop, PO Box 295, London WC1H 9TE. Prices include postage in the UK and for members of the British Forces Overseas, but overseas customers should add 15% to the value of the order for postage and packing. Payment can be made by cheque in sterling drawn on a UK bank, or by credit card (Mastercard, Visa, or American Express), stating card number, expiry date, and full name.

NOTES

Diabetes 2000

A symposium on screening and treatment of diabetic retinopathy will be held on 6–8 November 1992 in Innsbruck, Tyrol, Austria. Further details: Dr G F Kieselbach, Univ Klinik f Augenheilkunde, A-6020 Innsbruck, Anichstrasse 35, Austria. (Tel: 0512-504-4185/3748; Fax: 0512-504-3722.)

Marfan syndrome

The Second International Syndrome on the Marfan syndrome will be held on 7–9 November 1992 at the Hotel Nikko San Francisco, San Francisco, CA, USA. This symposium will immediately precede the 42nd Annual Meeting of the American Society of Human Genetics. Further details: Program Coordinator, Johns Hopkins Medical Institutions, Office of Continuing Education, Turner Building, 720 Rutland Avenue, Baltimore, MD 21205, USA. (Tel: (410) 955-2959.)