Book reviews

The Physiology of the Cornea and Contact Lens Applications. By HIKARU HAMANO and HERBERT E KAUFMAN. Pp. 100. £29.00. Churchill Livingstone: Edinburgh. 1986.

It is interesting to note that the two latest books dealing with changes in structure and function of the eye produced by contact lens wear have a similar cover—a photograph of interference fringes produced by varying tear-layer thicknesses on the front surface of a contact lens. Apart from the intrinsic charm of the patterns it also neatly illustrates that the repeated or continuous application of a manufactured appliance to the external eye is producing changes only imperfectly understood. Textbooks dealing with this topic are a comparatively new phenomenon, but a bench mark has been set over the last few years.

Compared with others of this genre the book cannot be considered a success. It would appear that the authors have not formulated an overall plan but have assembled a text from unrelated chapters, producing a book lacking cohesion and form. Furthermore the chapters written by the two authors are at a markedly different intellectual level, one giving essentially a personal account of a long career in contact lens research, the other a simplistic and basic primer on contact lens materials and fitting. For a book with this title there are also some surprising omissions. For example, there is no mention of the effect of contact lens wear on corneal sensation, an area where a large and pertinent literature exists.

In the chapter dealing with the anatomy of the cornea the majority of the illustrations are of the rabbit, no doubt culled from the authors' vast research output on this particular model. There is however a large amount of human material available, and in a 'clinical' book it is surprising it was not used. Although the corneal endothelium is described, the effect of contact wear upon it is not. This has been one of the growth areas of research in the last 10 years, and this omission demonstrates the insularity of the book. Chapter 3, 'Physiology of the cornea and effects of contact lens wear', is a fascinating account of Hamano's research work of the last 20 years. However apart from his own publications no references are given later than 1974. Chapter 4, dealing with the tear film and contact lens wear, quotes only Japanese work, completely ignoring the large American and European literature.

Chapter 5, 'Selection of contact lenses: clinical applications', is written in a question and answer format using a great deal of unscientific terminology—'sucked-on', 'cornea cannot breathe', 'see much more naturally', etc. This suggests that the chapter may originally have been written for an audience without specific ophthalmic training. In addition the statement on page 70 that in cases of nystagmus 'contact lens correction is more appropriate, because the lens remains centred in the optical axis, and asthenopia (eyestrain) is reduced', would not find acceptance in many circles.

For those readers who know the subject the book is of historiographic interest; for those seeking a basic know-

ledge of the important aspects it cannot be recommended. Its lack of breadth is demonstrated by the fact that of the 77 references cited 39 relate to the work of one of the coauthors. The preface to the book states, 'it is most important that we become knowledgeable about the interactions between the lenses and the cornea and tear film.' Study of this book would bring only limited progress towards that end.

E G WOODWARD

Primary Eye Care in Developing Nations. By LARRY SCHWAB. Pp. 203. £2.50. Oxford University Press: Oxford. 1987.

The 11 chapters start conventionally with 'Form and function,' followed by 'The eye examination.' Then there follow chapters on the main blinding conditions: cataract, blinding infection, malnutrition, glaucoma, and eye injuries. A further chapter deals with other disorders, including onchocerciasis, uveitis, and macular and retinal conditions. Squint is included here. Then there is a chapter devoted to refractive errors.

This volume contains a great deal of valuable practical information, arising from Dr Schwab's extensive experience in several African countries. This is particularly evident in the last two chapters, which deal with 'Appropriate technology' and 'Public health ophthalmology.'

The problem is the uneven treatment in the different sections. The reader gets the impression that the book started out to be a textbook based on the needs of ophthalmic medical assistants (or clinical officers, ophthalmic) in training, and then to widen the readership parts were simplified or abbreviated. The title 'Primary eye care' is therefore misleading. For example, the detailed description of cataract extraction and its complications, which is well done, would not normally be considered as part of primary eye care. Similarly, how to carry out refraction is not a function of primary health care workers, and gonioscopy is certainly not a primary care function. On the other hand the description of anatomy in very elementary terms, though suitable for a health assistant, would not be detailed enough for the trainee ophthalmic assistant or general physician.

There are some unfortunate errors, which detract from the authority of the text. Muscular contraction of the ciliary body causes the lens to become more spherical in accommodation, not to flatten as stated. In the drawings of esotropia and exotropia the light reflexes from the cornea are in the wrong positions. It is also surprising that the experienced reviewers allowed the use of diethyl carbamazepine for onchocerciasis to be included without stronger qualification, in view of our present knowledge of the adverse effects on the eye. There is nevertheless a wealth of information in this book and everyone will find something of value. One suspects that in any given training course some of the text will be found to be very useful, other parts to be less relevant.

When it goes into a second edition, as one hopes that it will, there would be an argument for focusing on the needs of one group—the ophthalmic medical assistants—and concentrating on their requirements and the level of detail they require throughout. There would then be a place for a second, much simpler, book addressed to the true primary eye care workers.

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