

Book reviews

Ophthalmic Plastic and Orbital Surgery. By MICHAEL A. CALLAHAN and ALSTON CALLAHAN. Pp. 230. US\$100. Aesculapius Publishing Company: Birmingham, Alabama. 1979.

This book is written primarily for ophthalmologists with a special interest in ophthalmic plastic surgery. It covers the fundamentals of plastic surgery including anaesthesia, surgical preparation of the skin, the principles of atraumatic surgery, haemostasis, wound closure, suturing techniques, materials, and dressings and then proceeds with chapters on congenital anomalies, enucleation, ptosis, entropion and ectropion, etc., as well as including chapters on blepharospasm and lacrimal, orbital, and conjunctival surgery. Operations and techniques are clearly described, with their potential complications and management. Most of these procedures can be recommended, but a more conservative approach may sometimes be justified. Thus few surgeons in Britain would recommend open reduction and wiring of a zygomatic fracture in the first instance.

The text is very clearly presented and superbly illustrated with copious coloured drawings but no clinical photographs. This omission is deliberate, since the authors have an extensive collection of pre- and post-operative photographs, but without them the uninitiated reader is not given an idea of the results which can be achieved with any given procedure. This would not be a disadvantage to a surgeon who is actively involved in ophthalmic plastic surgery, and for him this book can be highly recommended, as most of the procedures which he may want to try are so clearly presented and easy to find.

J. R. O. COLLIN

Ageing of the Lens. (Eds.) FRANCOIS REGNAULT, OTTO HOCKWIN, and YVES COURTOIS. Pp. 315. Dfl.115.00. Elsevier/North Holland: Amsterdam. 1980.

This is an interesting book comprising a collection of papers on diverse topics. The first part includes the genetic expression of γ crystalline synthesis, changes with age in lens enzymes and lens crystallins, and the properties of albuminoid and membrane protein. The second part deals with differences in cyclic nucleotide composition in different animals, and the changes which occur with age, the role of calcium in lens membrane permeability, together with several papers on the properties of different types of congenital cataract. The third part deals with clinical aspects of lens transparency and the assessment of drugs which might inhibit cataract formation by means of a comparison of photographs taken with an advanced photo-slit lamp.

R. F. FISHER

Evoked Potentials. (Ed.) COLIN BARBER. Pp. 614. £29.00. MTP: Lancaster. 1980.

This book represents a series of papers given at the International Evoked Responses Symposium, held in

Nottingham in 1978. The papers are all concerned with the electrical changes elicited over the scalp by stimulating different afferent nerves throughout the body. The production of these evoked responses by stimulating the eye with light, the ear with sound, and the skin with tactile stimuli is considered in different sections, and the nonspecialist reader may be surprised by some of the advances made in recent years. The first part of the book, on 'Background and perspective', gives a series of useful summaries of the up-to-date applications of these techniques, and the rest of the book provides a comprehensive reference source for the more specialised reader.

N. R. GALLOWAY

Microsurgery of the Glaucomas. By MIKHAIL M. KRASNOV. Pp. 184. £24.00. YB Medical Publishers: London. 1979.

This is not a manual of glaucoma microsurgery, though basic principles and operative details of a number of procedures are included, but an exposition of the author's approach to the surgical management of the glaucomas. This he terms cause-directed, and his choice of operation is governed by the principle of eliminating the specific cause of the raised pressure rather than circumventing it.

A number of conventional glaucoma operations, for example, iridectomy and goniotomy, fulfil the requirements of this approach, but the traditional filtering operations for open-angle glaucoma are considered unphysiological and best replaced by one of a number of microsurgical procedures. Thus trabeculotomy becomes the operation of choice when the major site of resistance to aqueous outflow is the trabecular tissues and externalisation of the canal of Schlemm, or sinusotomy, when the site of resistance is believed to be primarily intrascleral. For combined trabecular and intrascleral resistance the author advocates a modified trabeculectomy in which the trabecular strip is only partially excised and the free end inserted either into the anterior chamber—a trabeculostomy—or posteriorly into the suprachoroidal space—a trabeculocyclostomy.

There is much to recommend this approach to glaucoma surgery, but not without some reservations. For example, there is scant evidence for the existence of intrascleral resistance per se, and the diagnosis of such a condition on the basis of blood reflux into Schlemm's canal and a rise in pressure on limbal compression must be on shaky ground. Similarly the treatment of hypersecretion glaucoma by cyclocoagulation or cycloanaemisation is open to the criticism that the diagnosis, made tonographically, is by inference only. The relatively new microsurgical procedures described in this book are elegant and theoretically attractive but, like trabeculotomy before them, are unlikely to gain a wide following when effective and technically simpler procedures such as trabeculectomy exist.

The book itself is well produced, and the standard of illustration is high throughout. The text, a translation from the original Russian, is clear but not altogether easy reading, partly owing to the proliferation of hybrid terms such as sinusotrabeulotomy. As a practical guide to the surgery of glaucoma this book will have little

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appeal for most ophthalmologists, but it provides a useful account of the development of glaucoma micro-surgery over the past decade and in particular one surgeon's contribution to this field. ROGER COAKES

Current Concepts in Ophthalmology. Vol. 6. Eds. H. E. KAUFMAN and T. J. ZIMMERMAN. Pp. 254. £31.00. C. V. Mosby: London. 1979.

Goldman and Kaufman discuss the VIIth nerve lid block described by Nadbath and Rehman. The anterosuperior border of the mastoid process and the posterior border of the mandibular ramus are palpated where a 25-gauge $\frac{5}{8}$ -inch (16 mm) needle is advanced into the tissue perpendicularly to its full length, and thus the main trunk of the facial nerve is bathed in anaesthetic before its first bifurcation. A new ring blepharostat is described for penetrating keratoplasty which provides protection against anterior scleral collapse and separates the lids as well. In lens extraction combined with keratoplasty they suggest that the combined movement of lifting up and slightly twisting the lens about its vertical axis and at the same time pressing down with an iris spatula against the limbus disrupts zonules at the point of contact, and in this way the lens may be freed and then lifted out. The Kaufman vitrector has been redesigned from a rotating cutting blade to an oscillating-type cutter which prevents spooling of the vitreous. Irrigating solutions are discussed, and it is agreed that the glutathione-bicarbonate Ringer's solution is the least toxic to the endothelium of the cornea.

A double-running technique is described for keratoplasty using 2 continuous sutures of different calibre and different relative tightness running in the same direction. The 2 sutures are the 22–25 μ m nylon 10-0 on a GS-9 needle and the 16–18 μ m nylon on a GS-14 needle. When performing keratoplasty those patients with larger donor buttons than host beds do not develop the typical postoperative glaucoma syndrome. The disparate size of the donor button to host recipient bed changes the mechanics of the angle structures. If the donor button is the same size as the recipient bed, tight sutures and a thick host corneal periphery distort the angle and may collapse the filtering meshwork.

Katz and Kaufman discuss the effects of ocular surgery on the corneal endothelium, pointing out that human cell regeneration does not take place following trauma, and as the cornea advances in age the cells become larger and fewer. Intraocular lens implantation appears to be more traumatic to the corneal endothelium than uneventful cataract extraction. Endothelial damage is best prevented by ensuring nontouch between the intraocular implant and the endothelium itself as by a cushion of air or preferably GBR solution. Centifanto discusses host resistance in recurrent herpes simplex infection. Gasset contributes a chapter on lamellar keratoplasty and the treatment of keratoconus and describes the procedure of conectomy. The procedure is safe and the results compare favourably with those of penetrating keratoplasty.

Morse writes a chapter on the practical treatment of diabetic retinopathy, and this is followed by a paper on refractive keratoplasty by Friedlander and Granet.

Enoch discusses vertebrate photoreceptor orientation, showing that a fundamental property of vertebrate receptor optics is anterior pointing by the retinal receptors. If this orientation is disturbed, there is a reduction in light-guiding capability, reduced contrast sensitivity and resolution capability. Olson and his coworkers discuss in more detail the question of postoperative glaucoma in keratoplasty. Slow-release artificial tears as a method of treating the dry eye syndrome are described by Katz and Kaufman. Dawson and Lieberman give the evidence to support the idea of control retinal loops. There is a feed-back or control loop element located in the outer and inner vertebrate retina. The retina would seem to transmit and process visual information by graded potential as an analogue rather than a digital system.

Trobe and Quisling discuss the ophthalmologist's role in the prevention of overinvestigation of patients with neurological syndromes with eye complications. Chiou and Trzeciakowski provide a chapter on advances in cholinergic drugs for glaucoma therapy. Olson and Kaufman discuss recent advances in herpes simplex, vaccinia, varicella-herpes zoster, and epidemic keratoconjunctivitis. Immunotherapy of external disease and ocular malignancy is briefly reviewed by Boone, clinical research on timolol by Zimmerman, specular microscopy by McCarey, newer methods in diagnosis of herpes simplex keratitis by Rheinstrom and Kaufman, host defences in ocular herpes virus infection by McNeill, and clinical ophthalmic ultrasonography by Blackwell.

The book is an entertaining and instructive summary of recent research in ophthalmology and is a quick way for the busy ophthalmologist to update his knowledge and familiarise himself with the problems which are under present investigation. The standard of production in the illustrations and format is first-class. S. J. H. MILLER

Pathologie des Auges. Vol. 12. Ed. G. O. H. NAUMANN. Pp. 994. DM.544. Springer-Verlag: Berlin. 1980.

This book on the pathology of the eye is the twelfth volume in a comprehensive series dealing with the special pathological anatomy of the individual body tissues and organs. As such it is the modern counterpart of the internationally famous series of handbooks by Henke and Lubarsch so greatly esteemed by an earlier generation of pathologists.

Although almost of necessity in a book covering the whole of ocular pathology the services of several experts have been called upon, there is no variation in approach to the different chapters or in the depth of coverage as so often occurs in multi-author texts. This is because Professor Naumann has himself had a hand in the writing of all 17 chapters (5 were prepared by him alone). The book covers 994 pages and is written from a clinician's standpoint with an emphasis on clinicopathological correlation and differential diagnosis, the latter generally and conveniently being managed by means of tables. Photographic illustrations are plentiful and apposite, and there are over a hundred carefully devised and extremely helpful line diagrams. The comprehensive