

Book reviews

Handbook of Clinical Ultrasound. Eds. MARINUS DE VLIJGER, JOSEPH H. HOLMES, ALFRED KRATOCHWIL, EKKEHARD KAZNER, ROBERT KRAUS, GEORGE KOSOFF, JACQUES POJOL, and D. E. STRANDNESS. Pp. 970. £42.50. John Wiley: Bognor Regis. 1978.

This book is divided into 8 sections, each containing several chapters. The first, entitled 'Basic Principles', contains a historical account of the use of ultrasound in medicine and the basic physical principles of ultrasonic diagnosis. Features of transducers are covered with great clarity, followed by a discussion of some pulse-echo techniques together with technical considerations in design of diagnostic equipment. A very worthwhile chapter is then devoted to the principles of grey scale echography, together with its applications; the best quality ophthalmic B-scans in the book are to be found in this chapter. Artefacts and standardisation techniques are described in the following 2 chapters. Next, transducer arrays and the relatively new application of computers to diagnostic ultrasound are discussed in a way the ophthalmologist can understand. Interesting chapters are then devoted to the principles of Doppler ultrasound together with scattering and attenuation of ultrasound by tissue. Finally, the biological effects and safety of ultrasound are considered. Thus, the first section of this book provides a comprehensive guide for the ophthalmologist working in ultrasonic diagnosis.

Other sections are devoted to Doppler techniques and ultrasonic diagnosis in obstetrics and gynaecology, internal medicine, cardiology, neurology, and orthopaedics. The penultimate section of the book deals with diagnostic ultrasound in ophthalmology. This section begins with a lengthy article on so-called 'specialised' techniques, and many statements are controversial. It is hardly surprising, however, that the author feels grey-scale B-scanning is inadequate for observing echo amplitude when we see the very poor quality of the grey scale on B-scans presented in the third and fourth chapters of the section. These chapters are devoted to retinal and choroidal detachment and intraocular tumours, respectively. The authors of chapter 3 refer only to their own work in the list of references, while the author of the chapter on intraocular tumours states that macular melanomas are very rare (claiming to have seen only 3 cases in 14 years). In contrast, biometric studies are comprehensively covered in chapter 2, while the fifth chapter contains a practical and objective discussion of the role of diagnostic ultrasound in injuries due to foreign bodies. In the chapter on orbital disorders the author strongly advocates the use of A-scan rather than B-scan and make other controversial judgments. It is claimed, for example, that the A-scan technique should be used to measure the true diameter of the optic nerve and extraocular muscles. Anatomically, however, it is impossible to direct the sound beam so as to strike these structures perpendicularly and permit such measurements (even with deviated gaze). The author also claims that by his method an

experienced examiner can expect to detect or eliminate an orbital lesion in 98% of cases, and in 99% of cases the diagnoses made are correct. Finally, the ophthalmology section closes with an interesting chapter on the use of Doppler techniques in diagnostic ophthalmology.

Overall, the ophthalmic section of this book is disappointing. However, the ophthalmologist will benefit from reading the first section of the book. MARIE RESTORI

Microsurgery of the Vitreous. By RICHARD M. KLEIN and HERBERT M. KATZIN. Pp. 153. \$27.50. Williams and Wilkins: Baltimore, Maryland. 1978.

The authors' stated intention was to create a book quite different from others on vitreous microsurgery by comparing critically the latest surgical techniques, instrumentation, and philosophy. Unfortunately the first section, which considers the normal and pathological vitreous and previtrectomy evaluation of cases, conforms to the pattern of other recent vitrectomy manuals but falls well below their standard. The selection of material is arbitrary and fails to orientate the 'vitreous neophyte' meaningfully to the practical material which follows. The short chapter on the normal vitreous, for example, concentrates on biochemical rather than microanatomical aspects of structure, and left the reviewer in some bewilderment by claiming that it is the central part of the gel, rather than the cortical gel, which is the most viscous and has the highest collagen content. Similarly, in the chapter on vitreous pathology animal models of vitreous disease, some of which have dubious or unproved clinical relevance, are emphasised to the virtual exclusion of essential surgical pathology; we are given no clear statement, for example, as to the nature of the various types of vitreoretinal traction.

By obtaining the views of surgeons experienced in the use of several vitrectomy instruments the authors attained a qualified measure of success in section 2, which is designed to help the aspiring vitrectomist answer the question, Which instrument shall I buy? The authors concede, however, that there is no ideal instrument, and what is an advantage to one surgeon is a fault to another—witness the view that the Ocutome is 'too small'. Nevertheless, the interviewing technique allows the views of some of the most experienced and innovative surgeons, whose opinions otherwise seldom appear in print, to be given an airing. The chapter on ancillary modalities in vitreoretinal surgery is also quite useful, though ophthalmologists in the United Kingdom cannot fail to be amused by summary dismissal of liquid silicone injection despite the fact that combined vitrectomy and silicone oil injection procedures are likely to assume a greater and greater importance in the management of the severest vitreoretinal problems.

By the third section, which deals with the indications and complications of vitreous surgery together with published results, the authors' style of reporting tends to irritate, the same emphasis being given to anecdotal observation and hard statistics. This section does, however, provide a useful bibliography of material published up to 1977. The final section, which considers the future of