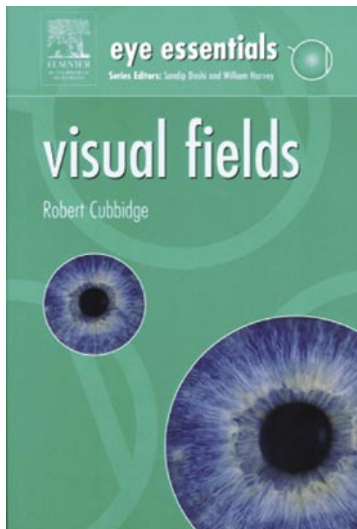


BOOK REVIEW



VISUAL FIELDS

Author: Robert Cubbidge

Publisher: Elsevier Butterworth-Heinemann, Edinburgh

Year of publication: 2005, 119 pages, 10 chapters, colour and black-and-white photographs and illustrations,

ISBN: 0 7506 8851 3

The book *Visual Fields*, by Cubbidge (a lecturer in Optometry and Vision Science at Aston University, Birmingham, United Kingdom), is part of a series of books on topics of importance to optometrists, ophthalmologists and others interested in vision and ocular health. The series is called *Eye Essentials*, and the series editors are two optometrists, namely Sandip Doshi and William Harvey, both from the United Kingdom. Other topics in this series of books include low vision assessment, routine eye examination, contact lenses and binocular vision. The books are intended to be relatively brief overviews of the vital or crucial skills and knowledge that vision and eye care practitioners need to understand in order to properly function within the specific niches of practice concerned.

After a short introduction, *Visual Fields* starts with a summary of the basic anatomical aspects (Chapter one) that must be understood to interpret any measured visual field obtained from a patient. The chapter is only a few pages long, and is well-illustrated and reasonably comprehensive in the context of the overall aims of the series itself. Many of the important clinical or diagnostic issues or criteria necessary for effective classification of the visual field loss, and also for initial localization of the lesion itself based on visual field appearance, are included. Appropriate information is provided here relating to the likely underlying disease also. The following three chapters

briefly describe some very basic aspects of the two primary types of perimetry (that is, kinetic versus static perimetry) and modern concepts of thresholding and computer analysis used in various commonly used autoperimeters such as the Humphrey, Dicon and Henson instruments. These chapters are easy to read and explanations are clearly understandable. Again, illustrations are included where relevant and they enhance the text and create interest for the reader. Chapter five covers vital aspects of clinical use of autoperimeters that should be considered to ensure that valid and reliable visual fields are obtained from such measurements of patients. Emphasis is placed on pupil size and other anatomical aspects such as eye lid position, refractive compensation and patient instruction and monitoring. Examples of typical findings in the presence of some of these confounding aspects are provided via suitable figures and visual field plots. As for other chapters, readers are also referred to other sources or published papers (albeit a limited number) for more information concerning some of the specific aspects discussed within the section involved. The next chapter entitled Analysis of Visual Field Data is possibly the one that many clinicians will find most informative. Here the crucial terminology and methods of modern autoperimetry are described in concise terms and some examples are included of graphical representation of Bebié curves (such curves, essentially cumula-

tive distributions of the severity of defect depth, are used to identify early visual field loss) and serial visual field analysis via box-and whisker plots. This chapter probably could benefit via a slightly more extensive inclusion of similar aspects relevant to other commonly used auto-perimeters besides the Humphrey. Chapter seven will also be interesting to most clinicians and recent developments in subjective and objective visual field measurement and analysis such as microperimetry (where a fundus camera and projected stimuli, visible on the fundus image, are used to allow accurate examiner placement or positioning of suitable test stimuli in terms of retinal or macular position) are briefly described. Another important modern approach included in this section is multifocal electroretinography, or mERG, which allows for relatively rapid measurement of multiple responses (or electroretinographic waves) from different retinal locations. The results of such electrophysiological measurements can be represented graphically with various two or three-dimensional plots, for example, with colour pseudo-3D plots of averaged wave amplitude over defined areas and these approaches greatly assist in more complete analysis of disease, and other physiologic processes, influencing the visual field at the retinal level. Simple illustrations and explanations in this chapter will assist anyone who might perhaps be unfamiliar with some of these more recently developed methods of vision and functional assessment such as flicker, frequency doubling and short-wavelength perimetry. (Some references are included at the end of the chapter for those who might wish to begin to read more about the specific methods concerned.)

Chapters eight and ten respectively provide brief descriptions of simpler screening methods of visual field assessment such as the Amsler grid, and a glossary of frequently used terminology in the area of perimetry. In Chapter nine, glaucoma and its characteristic visual field defects are briefly described and, possibly, future editions of this book should extend this material towards a more general, but still concise, discussion of commonly encountered ocular and systemic disease in clinical practice and the typical field loss

present with such conditions.

Overall, I found this book to be informative, easy reading and a generally helpful contribution to the literature available concerning the field of perimetry. Besides clinicians, especially students of optometry, dispensing or ophthalmic nursing would probably find the book to be a potentially useful addition to their collection of various learning resources.

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