MAGNETIC RESONANCE TECHNIQUES IN CLINICAL TRIALS IN MULTIPLE SCLEROSIS.

This short multi-author book sets out to be a ‘valuable summary of the state of the art, as well as a useful reference text from which to plan future clinical trials in multiple sclerosis’. It certainly succeeds, and I found it a worthwhile review of the MRI techniques in current use in all neuroradiology departments, as well as those which are as yet to extend from the research centres.

As the editors point out in their introduction, there is a general perception that we are about to enter the therapeutic age of multiple sclerosis. Several potentially effective treatments are currently available (if unfunded), and more are on the horizon. Clinicians will have to decide which of the several regimens available is best suited to a particular cohort of patients. Since at present MRI, along with clinical presentation, is the most effective tool to assist this, many neurologists will find this book useful in understanding standard and impending MR techniques.

The first chapter outlines the limitations of clinical endpoint measures, which will be familiar territory to most clinicians. The next three chapters describe the MR approaches which have been used to select patients for trials, and to treatment effects in phase II and phase III.
Chapters 5 and 6 describe the range of more recently developed MR pulse sequences, such as magnetization transfer, spectroscopy and diffusion weighting, which show promise in overcoming the inherent low specificity and qualitative nature of MRI findings. These topics are discussed without even the simplest explanation of the physics or rationale underlying the techniques, so the authors clearly assume an MR-literate readership. The results of the newer imaging strategies are discussed for phase II and III trials, in the hope that they will allow future trials a smaller cohort of patients for shorter follow up times to demonstrate a treatment effect.

Chapters 7 and 8 offer a comprehensive and up to date review of phase II and phase III trials already published in peer-reviewed journals. The authors acknowledge, however, that the pace of progress in this field is so rapid that the most recently published data will precede publication of their book: the new Beneseron data, for example, will probably have been published by the time this review is printed.

Chapter 9 discusses how MR can be optimized and a standardized in multi-centre and longitudinal multiple sclerosis trials, and the final chapter provides the basic concepts needed for a complete and accurate statistical interpretation of trial results.

I think this book will have different highlights for different readers: I found that the clinical sections were more helpful to me as a neuroradiologist than the technical discussions on MRI, which I found at times almost too brief. Neurologists may find the reverse, however. I am sure the book is a worthy addition to the departmental library of any neurology department, and its only real weakness is the admitted one: new data are being published so quickly that some of the sections will quickly become outdated. It most certainly provides to the interested reader a workmanlike approach to MR techniques in clinical trials in multiple sclerosis.

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