

**MAGNETIC RESONANCE IMAGING OF THE CENTRAL NERVOUS SYSTEM.** Edited by Michael Brant-Zawadzki and David Norman. Published by Raven Press. 416 pages. \$113Cdn approx.

As the editors state in the preface, this book is intended for "the befuddled practitioner" in need of "a distillation in one reference volume of the major practical points of interest" in MR of the central nervous system. This book is indeed an excellent basic text for radiologists and residents requiring a practical approach to yet another technically complicated new modality. The many contributing authors include a number of prominent names in clinical MR research (including Drs. L. Bilaniuk, T. Naidich, W. Kucharczyk, and R. Zimmerman, to name a few) including the editors themselves. Brant-Zawadzki, in particular, is a prolific researcher and author in the field.

The text is divided into two sections. The first portion, entitled "Basic Principles", begins with a refreshingly concise and simplified approach to the bare essentials of MRI principles and instrumentation. This is followed by a somewhat more detailed look at other technical considerations, including the often bewildering topic of MR artifact detection, as well as chapters describing the pathophysiologic reasons for signal intensity of normal and pathologic tissues, and a discussion of signal alterations with blood and CSF flow. Brief discussions of potential and current uses of paramagnetic contrast agents and MR spectroscopy follow.

In the clinical section, the subsequent chapters cover all the major areas of central nervous system imaging, discussing the essentials with plenty of high quality images. The topics covered include: functional neuroanatomy; degenerative brain disorders; congenital, neoplastic, vascular and infectious diseases; and diseases of sella and parasellar region, white matter, spine, nasopharynx and neck. Appropriate emphasis is given to imaging of the spine, with a short preceding chapter on maximizing speed and efficiency of lumbar spine examinations.

The editors recognize that MRI is a particularly rapidly evolving field within our rapidly changing specialty, and that published material can become outdated almost as soon as it hits the presses. This book, then, is a practical purchase for those of us who need a relatively short (and inexpensive) basic reference, at least the principles of which should remain valid for some time.

*Carla Wallace  
Calgary, Alberta*

**MIGRAINE AND EPILEPSY.** Edited by Frederick Andermann and Elio Lugaresi. Published by Butterworth's Publishers. 423 pages.

The book *Migraine and Epilepsy* edited by Andermann and Lugaresi developed as a result of a joint meeting of the Centre for Epilepsy Studies at the Neurological Institute in Bologna and the Italian Society for the Study of Headache on the topic of "Migraine and Epilepsy".

Migraine and epilepsy are paroxysmal disorders with distinct clinical features. Hughlings, Jackson and Gowers both

remarked on the coexistence of the two disorders and on occasion the difficulty distinguishing between these two disorders.

The editors of the present volume, like their distinguished predecessors, are careful to avoid obscuration of the fundamental differences between the two disorders while detailing the many similarities and highlighting the demonstrated relationships between migraine and epilepsy.

The clinical features of related migraine-epilepsy syndromes are detailed in the early chapters. These are amply emphasized through presentation of many case histories and discussion of the related features in the two syndromes. The very real difficulties in differentiating some migraine and epilepsy features are also highlighted in some of the case histories.

Benign epilepsies of childhood with occipital paroxysmal activity and the striking association with migraine in some cases is also illustrated with case histories and mechanisms relating the two disorders are discussed. Some of the authors speculate that basilar migraine may be the primary disorder with posterior cerebral distribution ischemic leading to the paroxysmal (epileptic) disorder. Other authors, notably Gastaut, points out the primary nature of the epileptic disorder in many of his collected patients and the association of a migraine syndrome in only about a third of his patients. Other authors including Terzano, Beaumanoir and Andermann, have noted the occurrence of headache preceding epilepsy, in conjunction with epilepsy and epileptic attacks occurring during a migrainous aura. Terzano speculated on the relationship of both migraine and epilepsy to the phenomenon of "spreading depression". They point out that animal experimental work suggests that the excitatory phase in this phenomenon may be associated with increased intracellular firing rates in experimental epileptic foci and negative phenomena, such as visual loss, may correspond to the subsequent inhibitory phase of spreading depression.

Bladin notes the association of benign rolandic epilepsy with migraine and comments on the conjoint lateralization of the migraine syndrome and the epileptiform discharges as well as other related clinical features. Lugaresi and co-authors note the association of episodes of transient global amnesia and confusional episodes as well as epileptiform attacks in association with migraine episodes and speculate on mechanisms relating these phenomena.

An interesting chapter is included on the striking association, in a group of patients, of migraine, epilepsy and multiple strokes on a background of the syndrome of mitochondrial encephalomyopathy. They also speculate on a possible link between the migrainous aspect and the stroke features in terms of smooth muscle involvement of cerebral arteries in these disorders.

There is a section on ictal headache with a number of case presentations illustrating the association of vascular headaches with seizures. All of the authors point out that the majority of cases are associated with focal or partial seizures and in the majority of cases lateralization of the headache and the seizure origin are inconsistent. Lugaresi speculates on the fact that altered consciousness is a frequent feature of seizures associated with vascular headaches and suggests that brain stem mechanisms involving noradrenergic and serotonergic pathways may be responsible for headache phenomenon.

Blume speculates on the possibility of increased free fatty acid and prostaglandin production as the common mechanism underlying vascular headache in both migraine and epilepsy associated with cephalic ictal pain.

There is an interesting section by several authors exploring the epidemiology and genetic aspects of migraine and epilepsy and speculating on the possible links in selected instances. There is unanimous agreement, however, that despite the striking association in certain instances there is unanimous agreement, however, that despite the striking association in certain instances there is no proof of pathophysiologic correlation or genetic link between these two disorders.

One section details pathophysiologic studies that may explain some of the underlying mechanisms in the phenomena of migraine and epilepsy. Some suggest a link between regional cerebral blood flow changes and spreading depression in migraine. Other data are presented on intracellular calcium mobilization and the effects on release of excitatory and inhibitory neurotransmitters and the authors speculate on the relationship to these two clinical phenomena.

This volume illustrates the apparent tantalizing link between migraine and epilepsy. Both disorders are paroxysmal and may share a mechanism of excessive neuronal discharge (although this phenomenon is most important in epilepsy). The two phenomena may also share some aspect of spreading depression but this mechanism appears to be important predominantly in the migraine phenomenon. There is a certain amount of repetition and redundancy in some sections but this is difficult to avoid in a volume derived from a meeting of this nature. The final chapter by Andermann is an unbiased evaluation of the data and concepts presented in this volume and summarizes current knowledge in this area. Neuroscientists interested in the relationship between these two phenomena and the mechanisms underlying these clinical syndromes will find this a particularly worthwhile book.

*R.D.G. Blair*  
Toronto, Ontario

“THE EARLY STORY OF ALZHEIMER’S DISEASE”. Edited by K. Bick, L. Amaducci and G. Pepeu. Published by Liviana Press, Padua, Italy. 147 pages.

This reviewer was recently honoured to be presented with an autographed copy of this seminal monograph from Dr. Katherine Bick, now the Deputy Director for Extramural Research at the National Institutes of Health (Bethesda, Maryland). Together with her co-editors, Professor Luigi Amaducci and Dr. Giancarlo Pepeu (University of Florence, Italy), Dr. Bick has celebrated the fifth anniversary of the Italian Study Group on Brain Aging, which supported this important publication. The six chapters comprise a painstaking translation of the historical papers on Alzheimer’s disease originally in German and Italian, by Alois Alzheimer, Oskar Fischer, Francesco Bonfiglio, Emil Kraepelin and Gaetano Perusini. This small text represents a first effort by the World Federation of Neurology Research Group on the Dementias to bring to present-day investigators involved in research on this condition the

thinking of the “founding fathers”.

The translator has preserved the flavour of the original writers, and clinical descriptions of these first patients come alive with beautiful lucidity. Reproduction of numerous Figures from the original texts includes handwriting samples of “senile agraphy”, microphotographs, and black-and-white histological drawings by the authors. A series of full-page Plates in the manuscript by Perusini includes three hand-drawings in colour, made with Abbe’s camera lucida.

The reader is repeatedly struck by the care which these early workers took with their observations, and by the clear thinking as they considered a variety of theories on the possible origin of the peculiar plaques and tangles which they observed in the brains of their patients. Of special significance is the record of the original case of the 51-year-old German housewife, which Alzheimer first reported to a meeting of the south-west Germany psychiatrists held in Tubingen, November 3-4, 1906.

After reading this publication, one will very likely be humbled by the realization that these first explorers were asking similar questions to those we regard as so original today. They debated the origin of the altered substance in the centre of the plaque – from within or without? – a puzzle with which we are still confronted. They also debated the specificity of the neuropathological lesions and their correlation with the clinical state – as we are still doing. And they argued with each other about the best ways to determine which were the primary events and which were secondary epiphenomena. Nevertheless, as one reads these groundbreaking papers, history may prove an instructive experience, because the path was clearly outlined by these pioneers. As the Foreword suggests, “We have but to follow their lead through the marshy thickets. With the promise of the tools of modern scientific neurology and serendipity, it may be our generation’s good fortune to reach the high ground and see the answers plainly.”

*M.J. Ball*  
London, Ontario

“SENILE DEMENTIA OF THE ALZHEIMER TYPE”. Edited by J. Thomas Hutton and Alexander D. Kenny. Neurology and Neurobiology, Volume 18. Published by Alan R. Liss, Inc. 404 pages. \$123Cdn approx.

This publication contains the Proceedings of the Fifth Tarbox Symposium – the Normal Rockwell Conference on Alzheimer’s Disease, held at Texas Tech University, Lubbock, October 18-20, 1984. The sixty contributors have provided twenty-five chapters, which are grouped under five major headings: Clinical Evaluation, Management and Treatment; Related Clinical Disorders; Epidemiology and Genetics; Basic Science; and National Prospectives and Future Directions.

Like numerous other recent publications on the organic dementias, this text contains some chapters which are little more than a rehash of previously published observations, together with some extremely novel and informative contributions by other authors. The few photographs and tables are clearly reproduced, and the alphabetical bibliographies at the end of each chapter are very well organized. It is curious why