

of the potential role of peptide release from afferent nerve terminals in cerebral blood vessels. The section on headache also gives the impression that constipation is a major clinical cause of headache. The book also makes some peculiar statements. For example, in the section on smell sensation, it is stated that "perfume of the right quality can wreak havoc with masculine emotions". No specific reference is given for this statement. All in all, however, this book does live up to its objectives and title. It provides a very useful synthesis of anatomy and physiology in a book of manageable size. Medical school neuroscience course directors should consider it for their courses, but should also ensure that adequate additional reference material which deals with the pathophysiology and clinical features of neurologic disease is available.

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NEUROSURGICAL CLASSICS. 1992. 2nd Reprint. Edited by Robert H. Wilkins, M.D. Published by the American Association of Neurological Surgeons. 523 pages. Price unknown.

In 1965 Robert Wilkins produced the first printing of his *Neurosurgical Classics* which for many years has become unavailable. This second printing (not a second edition) will be welcomed by the two generations of neurosurgeons who have grown up since the book's first appearance.

Fifty-two articles are reproduced in their original form complete with illustrations. The inclusions are grouped under neurosurgery in antiquity (two articles), basic experimental and clinical investigations, diagnostic procedures and techniques, surgical procedures and techniques — basic, craniocerebral and spinal.

The selection is limited to articles published before 1940. In 1965, when the volume first appeared, many of them were still relevant to the practice of neurosurgery. Today they are no less important because of their historical rather than practical interest.

Like any anthology, this bears the signs of the compiler's personal preferences, but no doubt the choice of contents will stimulate readers to indulge their own bias by applauding inclusions and deploring omissions. The selections, all the same, are well chosen and are necessary reading for thoughtful present day practitioners and investigators. Wilkins introduces each topic with a valuable appraisal of its historical place in the progress of neurosurgery. *Neurosurgical Classics* is one contribution to the neurosurgical literature that will never grow out of date. We look forward to a promised sister volume of "classics" which appeared after 1940.

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ADVANCES IN NEUROLOGY, VOLUME 57, FRONTAL LOBE SEIZURES AND EPILEPSIES. 1992. Edited by Patrick Chauvel, Antonio V. Delgado-Escueta, Eric Halgren and Jean Bancaud. Published by Raven Press, New York. 750 pages. \$114 Cdn. approx.

In his preface, Dr. Delgado-Escueta appropriately states that a major challenge is to apply current knowledge and technology to frontal lobe seizures and epilepsies.

Compared to the formidable problems that patients with frontal lobe epilepsy present to the clinical and basic neuroscientist, the data presented in this volume indicate that such advances have taken us little beyond the principles outlined by Penfield and Jasper many years ago.

Many of the clinical chapters are redundant. Contributions by Dreifuss and Williamson, each could have been expanded to encompass several others and used as opening chapters. The decision point system of seizure localization outlined clearly by Broglin et al. may help some readers but I found it excessively coercive and simplistic.

There are a number well written, informative chapters. The following are comments on some of these. Wiesendanger and Wise present a well organized, easy to read, well illustrated chapter on the functional organization of motor cortical areas and particularly of the non-primary motor areas. This includes a thorough discussion on the rationale for hierarchical and parallel organization of primary and non-primary motor regions. The value of this volume would have been further enhanced by a general introductory chapter by these authors on the motor system as manifested on clinical aspects of motor seizures. Schlag and Schlag-Rey present a useful discussion on the cortical role in ocular movements. Lüders and associates outline an interesting clinical-neurophysiological study on negative motor responses in humans to electrical stimulation of focal cortical points via subdural electrodes. Munari and Bancaud present an interesting hypothesis about the genesis of seizures arising from the orbital frontal cortex for SEEG data. Williamson contributes a sobering chapter on the problems associated with localizing of origin in frontal lobe seizures. This chapter would have been even more valuable if placed earlier in the book. The chapters by Porter, Meldrum and Mattson on antiepileptic drug therapy for partial seizures each has its own set of valuable contributions.

The chapters devoted to the basic science aspects of frontal lobe seizures present high quality data, but in many instances the writing seems directed to other basic scientists and not to the practicing clinician. Co-authorship of such chapters by a clinician with background in the basic science area would have enhanced considerably their value. Among other chapters, this applies to those by 1) Barbas on architecture and cortical connections of the pre-frontal cortex, whose diagrams could have been improved, 2) Fuster on pre-frontal neurones and cognitive foundation of motor action, and 3) Berger on the dopaminergic innervation of the frontal cerebral cortex. Apparently little is known about kindling of the frontal cortex as only a single paragraph in the contribution of McNamara et al. referred to the frontal lobe.

The data on some chapters, such as that by Buser et al. on callosal transfer and Grafman et al. on penetrating head injuries contain data obtained with outdated technologies. The former almost totally ignores major physiological contributions to our knowledge of corpus callosum function.

In contrast to Delgado-Escueta's assertion in the preface that clinical epileptologists should have expertise in positron emission tomography, the section on this subject shows how little PET has contributed to clinical decisions even though this investigation has neurobiological interest. Swartz et al. present a critical review of its clinical advantage and limitations while Henry et al. present a comprehensive overview of its principles.

As outlined above, there are several aspects of this volume which will prove valuable to any clinical neurologist and epileptologist. As it may be the only "collation of all that is known about frontal lobe seizures in epilepsies" (Delgado-Escueta), its lack of organization in editing leaves it short of helping the practitioner unravel the challenge of frontal lobe seizures. The elements are there but they need tying together. Thus, both the weight (2 kg) and its cost (\$114 Cdn. approx.) exceed its value.

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THE NEUROPSYCHOLOGY OF DEGENERATIVE BRAIN DISEASES. 1992. By Robert G. Knight. Published by Lawrence Erlbaum Associates. 351 pages. \$84 Cdn. approx.

This book is a review of a number of chronic neurological conditions from neuropsychological and clinical psychological perspectives. As the author admits the term "Degenerative" in the title is applied loosely. There are separate chapters on Korsakoff's syndrome, Alzheimer's disease, Multiple Sclerosis, Parkinson's disease, and Huntington's disease. Also included are shorter discussions of Progressive Supranuclear Palsy, Amyotrophic Lateral Sclerosis, Wilson's disease, Jakob-Creutzfeldt disease, and Pick's disease.

Part 1 of the book focuses on assessment techniques of use with these patients. While an exhaustive review would be beyond the scope of the book, the author does provide commentary and summaries of many of the more common procedures. He includes mental status examinations, a variety of behavioral rating techniques, measures of depression, and neuropsychological assessment techniques for intelligence, memory, and language functions. One other common instrument, the Wisconsin Card Sorting Test, is also described. This section is useful as far as it goes, but description of techniques for assessing other cognitive abilities are scattered throughout the rest of the book and thus are of less value for general reference.

Part 2 comprises the major section of the book, and is devoted to the description of the individual neurological conditions. He provides good coverage of multiple facets of the conditions. Each chapter begins with a short vignette describing a typical patient. Topics covered range from neuropathology and etiology, to results of detailed neuropsychological research, to the human impact of the disorders and issues of management. There is the occasional puzzler (for example, apraxia tests are mentioned in one sentence as particularly sensitive indicators of Alzheimer's Disease, but then not another word is said about them), and some topics are not dealt with so well as others (I would quibble, for example, with his description of the research comparing simple reaction times with choice reaction times in Parkinson's Disease). In general, however, this section is well done and provides a good overview of each condition.

Part 3 includes a thoughtful review of the impact of dementia (primarily Alzheimer's Disease) on the caregiver, and concludes with a "Neuropsychosocial Model" of the effects of degenerative disease on caregivers on patients. While I found his general discussion of the model to be of some interest, I did not see the value of the model itself. He says that it has "predictive elements", but it is not clear how to use the model to generate predictions. The various elements of the model are connected by

single arrows, double arrows, dashed arrows, or plain lines, but the meaning of this code is left to the reader's imagination. The model is more confusing than helpful, and detracts from the quality of the rest of the book.

This book is informative, readable, and of practical value. I would recommend it for clinicians working with these patients and their families.

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FRONTIERS IN HEADACHE RESEARCH VOLUME 1: MIGRAINE AND OTHER HEADACHES – THE VASCULAR MECHANISMS. 1991. Edited by Jes Olesen. Published by Raven Press. 384 pages. \$108 Cdn. approx.

This book is a summary of the most important work done in migraine and other headache in relation to mechanisms involving cerebral vasculature. It is dedicated to professor Neils Lassen who was one of the originators of the study of cerebral blood flow in Denmark and who developed the first method of regional measurement of cerebral blood flow in humans.

Jes Olesen the editor is one of the foremost investigators in the vascular mechanisms of migraine and was instrumental in describing a phenomenon of spreading vascular changes which occurred during the migraine aura. It was the fact that these changes which consisted of hyperaemia followed by oligemia did not follow a vascular territory which suggested that the primary mechanism was neuronal.

The book is a result of a conference held in Copenhagen of the subject of vascular mechanism in migraine. The first section of the book deals with methods. The chapters are by a variety of authors including Neils Lassen and John Stirling Meyer. Methods described include a comparison of the intrarterial or inhalation of Xenon on 133 cerebral blood flow measurements with xenon-enhanced computerized tomography.

John Stirling Meyer describes stable xenon CTCBF. The question of radiation doses with xenon 133, xenon 127 and 99m HMPAO technetium discussed by Soren Holm, this section finishes with a discussion summary of the methods by Neils Lassen. The second section of the book consists of interictal studies of migraine of aura.

The third section consists of studies of the Ictus and contains discussions of reversible hemispheric ischemic in a patient with aura which seem to be associated with a vasal constriction of the right internal carotid artery.

Section four is concerned with spontaneous attacks of migraine with aura, in here studies are described with 99m HMPAO technetium showing some diminishment of cerebral perfusion, but nothing comparable with those findings of Olesen using different methodology. Measurements of cerebral blood flow using xenon ct methodology found increased cerebral perfusion both in the white matter cerebral cortex and basal ganglia.

Section five deals with the mechanisms of migraine with aura concerning a variety of topics including biochemistry. E.g., changes in aspartate and glutamate, physiological studies in animal preparations and the possibility that cortical spreading depression is related to the migrainous aura. Some evidence of this is presented KMA Welch's group using magneto encephalograph during and between migraine attacks.