

several laboratory animal models which have been used to study the development of long-term memory in marine mollusks, the development of the rat motor cortex and the visual system. Part III is the largest section and has seven chapters that describe neurobehavioural changes in a variety of early brain disorders which include congenital malformations, surgically induced lesions for treatment of epilepsy and tumors, focal infarctions and autism. Neurobehavioural data as well as observations from quantitative functional magnetic resonance imaging are discussed. The two chapters in the final section (Part IV), address therapeutic interventions which are based on the theory of plasticity within the central nervous system. Proposals for effective interventions for high risk infants of very-low-birthweight are described and exciting results are reported, which suggest that it may be possible to achieve improvements in performance with appropriate interventional strategies. The final chapter summarizes and integrates our current understanding of biological brain development, learning and neuroplasticity and raises provocative questions for future research.

Although many of the contributors to this text are basic neuroscientists, the text manages to maintain a remarkable balance between experimental observations and clinical applications. In my opinion, this text succeeds in fulfilling its primary objective of bridging the gap between neuroscientists and clinicians and fostering collaborative research between the disciplines. This text provides fascinating reading for clinician-researchers, as well as for pediatric neurologists, pediatricians and therapists who are concerned with the causes and management of disabling developmental disorders in childhood.

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BRAIN TUMOR IMMUNOTHERAPY. 2000. Edited by Linda M. Liao, Donald P. Becker, Timothy F. Cloughesy, Darell D. Bigner. Published by Humana Press. 373 pages. C\$198.45 approx.

Currently, the treatment of malignant gliomas is suboptimal with the vast majority of patients dying of their disease. Novel therapeutics hold promise in combating this deadly disease but they do not have an established role in brain tumor therapy. Interest in immunotherapy in oncology has been increasing in recent years and it is natural for neuro-oncologists to explore this form of novel therapy for their glioma patients. An argument could be made that producing a text dedicated to an unproven therapy for an incurable disease is unwise at this time; however, the field is rapidly developing and warrants scrutiny for its vast potential.

While this text is not of general interest, it can be recommended for clinical neuro-oncologists and neurosurgeons who treat brain tumor patients as well as researchers interested in exploring this field. The editors have put together an excellent group of contributing authors who are on the leading edge of research and trials in immunotherapy for brain tumors.

The initial section of the text offers basic information regarding gliomas including pathology, epidemiology and standard treatment for the disease. While useful for those with little background knowledge in brain tumors, it may be superfluous reading for the intended audience. The brain tumor pathology chapter stands out as an excellent synopsis for any interested reader.

The second section is perhaps the most useful for those interested

in learning more about the field. It covers the major issues surrounding the immune interactions within the nervous system and specifically how these interactions present opportunities and roadblocks in immunotherapy for brain tumors. This section quite easily could be recommended for any neurologist, neurosurgeon or neuroscientist interested in updating their knowledge of immune interactions within the central nervous system.

The following sections focus on various methods of immunotherapy for brain tumors including tumor vaccines, monoclonal antibody strategies, immunotoxins, immuno-gene therapy and other forms of immune modulation. The chapters are authored by leading investigators in these fields and offer a comprehensive survey of the various techniques and clinical studies in immunotherapy. Most of the studies involve preclinical cell culture and animal models and a few early phase I/II human trials. This may disappoint those looking for evidence that these therapies will be effective for their patients. In fact none of these immunotherapeutic strategies may prove efficacious for the treatment of brain tumors but there is definitely some fascinating work ongoing that will likely serve as a stepping stone for more advanced therapies.

The text is quite readable but does suffer from some of the problems commonly associated with multi-author books. The writing styles can vary considerably as can the organization of the chapters. There is also a significant degree of redundancy of basic principles within the introduction of each chapter. Probably the most irksome issue is the overuse of abbreviations in the text. Many of these acronyms are nonintuitive requiring the reader to page back to earlier sections of the text for clarification. For the most part, the text is tightly written and coherent even for those with no immunological background.

Overall, this book serves as an excellent introduction to the field of immunotherapy. Only time will tell whether this text will be a forerunner to therapeutic revolution in neuro-oncology or flounder as another failed contender in the fight against malignant brain tumors.

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DIFFERENTIAL DIAGNOSIS IN NEUROLOGY AND NEUROSURGERY A CLINICIAN'S POCKET GUIDE. 2000. By Sotirios A. Tsemntzis. Published by Thieme. 336 pages. C\$51.45 approx.

The author of this slim pocket guide is a neurosurgeon, who states in his preface that he intends the book to serve as a quick aid to differential diagnosis in the care of patients with neurologic or neurosurgical diseases. The organization is somewhat idiosyncratic, with chapter headings ranging from Epidemiology of Neurologic Diseases, to Neuroradiologic Diagnoses, to symptom complexes such as Movement Disorders and Neuro-Ophthalmology. Each chapter consists of a series of annotated lists, usually a description of a particular clinical sign followed by a differential diagnosis.

In browsing through this book, one finds some useful pearls. There are clear diagrams of spinal cord sections and the clinical findings associated with specific lesions. There are examples of MRIs, which are well-chosen and legibly reproduced. Many common clinical scenarios are discussed, for example, stroke in the young, back pain, headaches and cranial nerve palsies.

However, the organization of the information is confusing. For example, blepharospasm is discussed twice, in two nearly identical tables within the same chapter, but nystagmus is not. The discussion of some diseases includes detailed clinical descriptions, while the clinical picture of other neurologic conditions is not described but discussed only in terms of possible causes. The sections on peripheral nerve disorders would have been much clearer and useful with diagrams of the relevant neuroanatomy. There is virtually no information on some common conditions, such as subarachnoid hemorrhage and multiple sclerosis. A number of disease specific neurologic scales are the only content of the chapter on neurorehabilitation, but their utility is not discussed, nor are commonly used scales, such as the Kurtzke EDSS scale, included. This is clearly a very individual compilation, with very few references.

The author wished to make this text a portable, easily available, single source of information. However, the material included is too variable to justify carrying this in one's pocket on the wards. The absence of any information regarding diagnostic testing, therapeutics and management also limit its usefulness to junior trainees. In the year 2001, most hospitals have computerized information sources easily available to clinicians, and the breadth and depth of evidence-based information and resources in neuroscience through those sources easily outstrips that available in this slim text.

A junior trainee would be best served by generating their own summaries and tables while studying from more inclusive texts. For the practicing clinician, this text does not contain enough information, or organize it well enough, to justify its addition to a crowded bookshelf.

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BEHAVIOR AND MOOD DISORDERS IN FOCAL BRAIN LESIONS. 2000. Edited by Julien Bogousslavsky and Jeffrey L. Cummings. Published by Cambridge University Press. 554 pages. C\$117.60 approx.

Behavior and Mood Disorders in Focal Brain Lesions is an overview of the emotional and behavioral consequences that occur not only with discreet brain lesions (as the title may suggest) but also specific neurological diseases including epilepsy and neurodegenerative diseases. The true emphasis and strengths of the book are on the correlations between anatomy and the neuropsychiatric symptoms.

The first chapter takes on the daunting task of synthesizing available knowledge. The chapter dissects Jeffrey Cummings' theory of brain as it involves mood and cognition as described in instrumental, fundamental or executive syndromes. Each encompasses different aspects of mood and behavior including cognitive, neurobiological, anatomical and neurochemical substrates. The rest of the book fills in the details, usually from two viewpoints. For the behaviorist or psychiatrist who begins with a set of specific symptoms or clinical features, reviewing the appropriate chapter will help identify which anatomical areas and central nervous systems diseases are associated with the symptoms of interest. For those starting with a known lesion or anatomical dysfunction, for example the basal ganglia, a review of this chapter describes possible cognitive and mood disorders associated with

these areas of the CNS. There are several introductory chapters addressing some methodological issues inherent to the study and evaluation of mood and behavior on a practical level. The chapters include working definitions of terminology, an excellent critical appraisal of the scales used to measure these features, and other technical considerations probably more relevant to the clinical researcher than the practising clinician.

The remaining chapters vary in depth and organization with clear overlap between chapters exploring each syndrome from either end. In a cover-to-cover read, there is considerable repetition. For example, the frontal-subcortical connections are reviewed in chapters 1, 6, 8, 9, 10, and 11. However, possibly because of the perspective of individual authors, some pertinent references are omitted in some discussions, but included in others.

Chapter 6, dealing with mood and behavior in disorders of the basal ganglia, is particularly strong as an independent, comprehensive review from both the perspective of disease and anatomy. Chapter 17 on anosognosia is another good chapter that approaches specific agnostic syndromes with emphasis on behavioral, anatomical, symptomatic associations and experimental studies and finishes with possible mechanisms that give the reader a complete perspective.

Most of the references are from the 1980s and early 1990s when CT and MRI began systematically to confirm and identify lesion location and behavioral correlates. There are only a few references made to the use of functional neuroimaging, particularly fMRI or PET that illustrate how a given lesion affects the neural systems that underlie clinical states. While several authors mention the inadequacy of studying acute focal lesions in isolation, this critical issue inherent in all attempts at structure-function correlation was unevenly addressed throughout the text. Clinical cases comprise the main substance of some chapters. This format serves more to illustrate structure-function relationships, rather than to unravel the associations. Those hoping to read a more experimentally driven model of behavior with lesion studies as a foundation will be disappointed but nonetheless intrigued.

Medical students, residents and clinicians seeking to generate a broad differential diagnosis for specific psychiatric disturbances, particularly those that accompany neurological diseases, will find having this book useful as a reference. No matter if you start with the "where the lesions is" or "what the lesion is" approach, you will be able to find a quick and useful review of the relationship between these two clinical questions. For those with more theoretical interests of the complexities of neural systems underlying mood and behavior, this text provides a good beginning.

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MERRITT'S NEUROLOGY. 10th Edition. 2000. Edited by Lewis P. Rowland. Published by Lippincott, Williams and Wilkins, New York. 1002 pages. C\$130.00 approx.

This new general textbook of neurology is intended for medical students, house officers, practising neurologists, non-neurologist clinicians, nurses, and other health care workers. It attempts to provide the essential facts about neurological conditions that are likely to be encountered. It succeeds admirably well in this task.

The table of contents is divided into 25 sections, starting with