The clinical science of neurologic rehabilitation. 2nd edition


This is an excellent book and a major tour de force through the whole field of neurological rehabilitation. The main attraction of this book over an increasing range of textbooks on the same subject is the merging of basic neuroscience and clinical medicine. There are a number of good textbooks on each of these subjects but none that have so successfully bridged the gap between scientific and clinical practice. It is a major achievement for a single author to have successfully spanned this divide. The major advantage of a single author for such a textbook is that the style is uniform and consistent and the background level of knowledge required does not fluctuate from chapter to chapter, as usually happens with multi-author texts. The style is easy and the book is a pleasure to read. Each chapter is very thoroughly referenced for those who wish to go into greater detail.

The first section covers the neuroscientific foundations for rehabilitation. There are four chapters, which cover neural plasticity, neural repair, functional neuroimaging, and the use of neuroprosthetics. These chapters are particularly interesting for the clinician who has only limited up to date knowledge of the relevant basic neuroscience.

In the introductory chapter of the book the author correctly states that the interface between genetics and pharmacology of psychoactive drugs is an ill known area. Knowledge of this field would interrelate nosology, genetics, and pharmacology, thus allowing the choice of the most appropriate treatment for an individually identified patient affected by a specific disease. The subject is difficult to grasp, due to its complexity and to the paucity of solid data. Therefore, the book provides a number of viewpoints from which to address the issue: clinical and molecular background, and pharmacokinetics. This approach allows a focus of a number of methodological issues related to the general principles of pharmacogenetics.

The second section covers common practices, including chapters on the rehabilitation team, approaches for walking, use of outcome measures, and a chapter on more general acute and chronic medical management including such issues as orthostatic hypotension, the neurogenic bladder, pain management, and nutrition. The chapter on outcome measures is particularly useful and provides a succinct resume of some of the problems that are common to many neurological disorders. Some of the sections are rather short but the excellent referencing system does point to the more detailed literature.

The third section covers specific neurological disorders, including stroke, traumatic brain injury, and spinal cord injury. There is a relatively short final chapter covering other neurologically disabling disorders, including Parkinson’s disease and multiple sclerosis as well as mentioning cerebral palsy, balance disorders, Alzheimer’s disease, and epilepsy. Some of the latter disorders are covered in greater depth and the subject could have been better in retrospect to leave these out altogether.

The section on epilepsy, for example, only covers half of one page.

This is, however, a minor criticism of an excellent book, which is frankly a landmark in the development of neurological rehabilitation. This book clearly illustrates that neurological rehabilitation should now be viewed as an established and vibrant specialty with an exciting future. Bruce Dobkin should be congratulated.

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Pharmacogenetics of psychotropic drugs


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The main section of the book deals with the pharmacogenetics of psychoactive drugs used to treat the most common psychiatric disorders. One of the main sources of complication is that each drug acts on more than one class of receptors and that multiple receptors’ activities are implied in the treatment of each psychiatric disorder. Genetic variability affects receptors for monoamines, thus influencing the response to psychotropic drugs. The ideal profile of activity on receptors is still not consistently defined, and each of the antipsychotic drugs used in clinical practice has a specific affinity profile. This is one important key for understanding the clinical response to treatments, vulnerability to side effects, or improvement in some specific disease related issues such as cognitive performance.

Other important topics include the pharmacogenetics of amphetamine and psychostimulants, the GABA–benzodiazepine complex, and a review of the genetic factors involved in the response to drug treatment for important diseases, such as bipolar mood disorders, epilepsy, Alzheimer’s disease, and drug dependence. This book provides a palette of information showing that, while as a discipline pharmacogenetics is still at the dawn of its development, it bears an important potential for implementing a thoughtful clinical practice.

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Reducing the burden of headache


It is now becoming clear that the physical effects of traditional neurological diseases, such as multiple sclerosis, Parkinson’s disease, and motor neurone disease, are the tip of an iceberg of neurological disability, with its meagre crop of hard physical signs and radiological abnormalities, accounts for a large proportion of, for example, the time lost from effective work in the community as a whole. In clinical practice it is becoming important to assess not only absenteeism from work, but also reduced efficiency of those patients who struggle to get to work. The disruption of family and social arrangements prompted by fear of the next attack may also be highly significant. A study of the medical staff in one Rome hospital found absenteeism to be low, but we must be careful not to assume everyone is so determined!

The latest volume in Professor Olesen’s series, Frontiers in headache research, which is again based on his well established research seminars in Copenhagen, brings together most of the world authorities in the epidemiology of headache, with particular emphasis on the assessment of the disability headache can cause, and the extent to which we can measure amelioration following medication. The text is very thoroughly referenced, and gives good descriptions of, for example the Migraine Disability Assessment Questionnaire (MIDAS), the Headache Impact Test, and various quality of life scales. These are all validated ways of assessing disability in its own right, as well as the end points of trials, needless to say supporting the view that expensive drugs can often be justified in economic as well as human terms. There is a long section devoted to indirect costs of headache, and discussion of different ways of organising healthcare delivery for headache patients. Many readers of this journal looking at this book will be, I hope agreeably, surprised to find that, even in this somewhat socially orientated field, the science is equally the equal of that in other neurological diseases. Professor Olesen is to be congratulated in this book, and encouraged to continue the series.