Book reviews

DISEASES OF THE NERVOUS SYSTEM: CLINICAL NEUROSCIENCE AND THERAPEUTIC PRINCIPLES. Third edition
Edited by A. K. Asbury, G. M. McKhann, W. I. McDonald, P. J. Goadsby and J. C. McArthur

Broadly speaking, neurology textbooks can be placed in three categories: small introductory texts, aimed primarily at medical students and junior doctors; single-volume texts that give a more thorough coverage of the subject for neurology trainees and provide an easy source of reference for non-neurologists; and large, multivolume texts that are usually used as the first point of reference by neurologists before going to the primary literature. This textbook, which comes in two volumes with an elegant box and is over 2000 pages in length, would seem naturally to fall into the last of these categories.

However, if you approach the book with this expectation you will be disappointed, for this is neither the aim nor the outcome for this text. The editors have aimed to focus on the mechanisms of neurological disease and the principles that form the basis for therapy, and specifically do not deal with the incidence, natural history or phenomenology of neurological disease, the bread and butter of most neurological texts. They assume a basic grasp of neurology before going to the primary literature. This textbook, which comes in two volumes with an elegant box and is over 2000 pages in length, would seem naturally to fall into the last of these categories.

The five editors have marshalled the 129 chapters from 213 mainly American and British contributors into 17 parts. Part 1 is an introductory section that deals with general principles. It is followed by sections first classified on the basis of the level of the nervous system, disorders of higher function, motor control, special senses, spine and spinal cord, neuromuscular and body function disorders, and disorders of myelin, secondly classified on the basis of disease process, cerebrovascular, neoplastic and autoimmune diseases, infections, trauma and toxins, degenerative disorders, and thirdly using syndromic classifications, headache and pain, epilepsy, and finally a section on the neurological manifestations of systemic conditions.

There is no entirely satisfactory system of categorization. The one used here does lead to some surprising divisions: Parkinson’s disease is categorized under disorders of motor control, whilst Alzheimer’s disease and frontotemporal dementia are under disorders of higher function, and Huntington’s disease comes under degenerative disorders; the section on cervical pain features among disorders of the spine and spinal cord and not under headache and pain. Overall, given that the book is likely to be dipped into rather than to be read cover to cover, this does not significantly compromise the book.

The contributors are generally well known, many having made seminal contributions in the area they write about, so it is unsurprising that the individual chapters are of high quality. They are well referenced, most chapters having extensive references up to 1999 and some from 2000.

Given that this does not aim to be a conventional textbook, it is interesting to see how well the different approach works. Let us consider a few examples. It works well in the section on autoimmune disease, though, as will be seen, it does not entirely replace the more conventional approach. An excellent chapter on the immune mechanisms in neurological disease starts with an explanation of basic relevant immunology and builds to the pathogenesis of neurologically determined diseases. This is followed by a very practical chapter on the basis of immunotherapy in neurological disease that highlights the hazards of immunosuppression, along with an exploration of the principles of treatment. This is followed by chapters on ‘Vasculitis of the central nervous system’, ‘Sarcoidosis’ and finally ‘Collagen-vascular diseases and the nervous system’. These chapters have some discussion of pathogenesis and treatment, but this is balanced by discussion of the epidemiology and clinical features of the conditions and their differential diagnoses and investigation, as one might find in a more conventional textbook. Other relevant conditions, such as Guillain–Barré, chronic inflammatory demyelinating polyneuropathy, peripheral nerve vasculitis, myasthenia gravis and polymyositis, are all dealt with in the section on neuromuscular diseases. Multiple sclerosis is not directly considered in the section on autoimmune disease but in the next one, as a disorder of myelin (with a good summary of why it may or may not be an autoimmune disease). Thus, in this section an exploration of the pathogenesis of immune disease, which is being understood increasingly, is backed up by a chapter on treatment based on principles (rather than specific studies), and is then applied to specific conditions.

In the section on headache and pain the approach works less effectively, even though the chapters themselves are still of high quality. There are chapters on peripheral nociception and the genesis of persistent pain and on the central nervous system mechanisms of pain, followed by a chapter on the...
management of chronic pain. These are then followed by excellent and very practical chapters that cover not just the principles but also the details of management of ‘Migraine’, ‘Cluster headaches, other trigeminal autonomic syndromes and the short lived headaches’, ‘Orofacial pain’ and ‘Chronic daily headache’. The distance between the basic science and clinical practice here seems too great, and interesting basic science sits next to practical clinical advice without the case for the juxtaposition being made.

In a text aiming to discuss the therapeutic principles, it is disappointing that there is a paucity of some of the evidence-based approaches to therapy; for example, the NNT (number needed to treat) and the NNH (number needed to harm) for different therapies. Sadly, this reflects the limitations of the data within neurology (with the exception of stroke, for which these data are well presented) rather than in this book. This does highlight the large number of conditions for which a theoretical or possible therapeutic effect has not been formally tested.

There are a few minor gripes. The colour illustrations are not interspersed within the text but appear between pages 318 and 319 in the first volume and pages 1326 and 1327 in the second, without easy reference within the text. Whilst the volumes are not intended to be exhaustive, there are some surprising omissions (e.g. leprosy) and some areas for which there is disappointingly little information, such as tremor in peripheral neuropathy and hemiballismus—as we found when we looked up them up for clinical reasons when the book was being used in our department. For the most part the editors have succeeded in avoiding repetition. However, the excellent section on neurodegenerative diseases by Stanley Pruisner discusses prion diseases in some detail, a subject that is revisited by another excellent chapter on prion disease by Bob Will.

The index, which takes up 100 pages at the end of each volume, is easy to use and accurate.

This book reflects a huge piece of work, and contains many extremely good chapters. The format the editors have chosen, with their aim of focusing on pathophysiology and the principles of therapeutics, means this book will not compete directly with more conventional texts. As a result, it will not replace the other traditional-format large textbooks for most trainees. However, trainees, along with many established neurologists, who are looking for a slightly different perspective on an area will be rewarded by reading the relevant chapters here. The book is expensive for an individual to buy so I expect that they will be reading it in the library. Encourage your librarian to make it possible for them to do so.

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