PostScript

BOOK REVIEWS

Neurological emergencies, 4th edn

Medical SHO’s training only infrequently includes a dedicated attachment to neurology. Routine neurology then seems daunting enough, but neurological emergencies may appear a worst nightmare. This updated compilation of 13 reviews covers common neurological emergencies in surprising detail. Most practically useful are those focused on predicting common problems, such as medical coma and acute visual loss. Stroke and status epilepticus are treated authoritatively, but first seizure, a common emergency referral, is not included. Subarachnoid haemorrhage is now presented but may have been even more useful if considered as one cause of acute headache. Brain stem death criteria are described clearly but, if emergency means cannot wait until morning, their inclusion is unexpected. The summaries concluding each chapter are disappointingly printed black on dark grey, in smaller type than the text, hard to read even in daylight. Perhaps the publishers intended it, but these summaries will not readily copy for handy laminated reference in the emergency unit.

Neurological emergencies is too large for the white coat pocket (nearly 500 pages), and too longhand for last minute reference behind the patient’s curtain. Its style is detailed prose rather than notes and bullets. Nevertheless, this book will usefully inform clinicians of all grades and increase the likelihood that neurological patients are managed safely. At £45, they may be only one departmental copy, but that must be on the registrar’s bookshelf. At risk of stating the obvious, the book should be digested calmly, away from the coalface, before the emergency presents. Then those faced with serious neurological situations need not echo Arthur Dent in Hitchhiker’s Guide to the Galaxy, “Oh, it’s at times like this […] that I really wish I’d listened to what my mother told me when I was young.” “Why, what did she tell you?” “I don’t know, I didn’t listen.””

P E M Smith

Psychoneuroendocrinology: the scientific basis of clinical practice

In the last two decades a wealth of information has been gathered regarding the potent influences of our endocrine hormones on the brain and behaviour, giving rise to the discipline of psychoneuroendocrinology. By calling upon leading authorities in their subjects, Wolkowitz and Rothschild have produced this timely volume that explores, with great clarity and success, what might be the clinical significance of the empirical scientific findings in this emerging field and how this may underpin breakthroughs in the treatment of behavioural and affective disorders. Essentially, each contributor considers the hormonal changes observed in primary psychiatric illness, the psychiatric sequelae of hormonal dysregulation in primary endocrinological illness, and the potential for exogenously administered hormones or hormone antagonists to influence behaviour and affect.

The main text begins with a delightful account of the historical roots of psychoneuroendocrinology, dating back to the ancient philosophers, and the recent rapid development of this discipline. There is then an exhaustive coverage of central nervous system neuropeptides and hypothalamic releasing factors, which addresses the controversial question of whether alterations in their secretion contribute secondarily to or are causative of aspects of psychiatric illness. There is also a balanced view of the potential use of melatonin and its analogues as chronobiotic drugs, and a review of the psychiatric manifestations of endocrinopathies—including diabetes mellitus and those affecting secretion of prolactin, growth hormone, and parathyroid hormone. There follows a section each on glucocorticoid hormones, gonadal hormones, and thyroid hormones, considering conditions of over- and/or undersecretion, which can produce behavioural symptoms closely resembling signs of primary psychiatric illness. The penultimate section is devoted to the use and interpretation laboratory testing in clinical psychoneuroendocrinology to improve accuracy of diagnosis and treatment. The volume ends with an updating of Hans Selye’s original exposition of the general adaptation syndrome that occurs in response to stressors—both exogenous and endogenous. Although mounted to protect the host, the stress response itself may become harmful—both emotionally and physically—if allowed to proceed unchecked.

This comprehensive work clearly demonstrates the importance of crossing the traditional boundaries of endocrinology, neuroscience, and psychiatry, and represents an approachable and informative text that should be of value not only to clinicians from many disciplines, but also to basic scientists, teachers, and the educated public.

Clinical neurology, 3rd edn

Clinical neurology is now into its third edition since first appearing in 1989 under the original editors David Marsden, an indication of its popularity. It is well known that a large proportion of consultations in primary care have their origins in the psychological wellbeing of the patient. There is clearly a need for a reference book in this area that strikes the right balance in presentation of complexity and usefulness, without being overwhelming. With this in mind, is this book of use to a primary care physician with limited training in behavioural medicine?

The early chapters go back to basics and focus on the doctor–patient relationship. The reader not so keen on this approach may be lost by the wayside in these chapters. However, for those prepared to re-evaluate the patient interview, the chapters in this section be very insightful. Because this is a quick reference book, if the reader is so inclined, the early chapters can be skipped, but the reader may miss out on the central message of the book, which is the understanding of the doctor–patient relationship. Further thumbing through the book will reveal comprehensive backgrounds and practical approaches to psychiatric, medical, and behavioural disorders in primary care, including pharmacological treatments for psychiatric illnesses. The book is written for the US healthcare system but most treatment options suggested are available in the UK. The presentation of information is stylish and cohesive, with the 35 chapters following a similar format including case illustrations. These illustrations are interesting but occasionally a little too simplistic. The book’s major achievement is its diversity, which is also its weakness, as some detail is lost. However, this is a minor criticism.
Overall, this is a well edited and presented book, which fulfills its aims as a practical reference book adequately. It offers a different approach to behavioural and medical problems in the primary care setting. Although the book would be of limited use to trainees in psychiatry, due to its primary care focus, it would serve as a useful text to those in primary care, other healthcare professionals, and students.

Quantitative MRI of the brain—measuring changes caused by disease


We have waited for a long time for a comprehensive book on magnetic resonance (MR) techniques that will appeal to the neurologist/neuroradiologist as well as the physicist and researcher. A book that is right up to date and is relevant across the board for all who are interested in the technique and that deals with quantification.

Paul Tofts has produced a book that is in the coffee table style, in the best sense of the concept, and in price; in the fact that the book invites you to pick a section at random and find that the information is immediately accessible and self-contained. The level of detail is impressive, as is the design of the presentation where information of different types is presented in boxes comprising summaries, opinions, and practical suggestions. The layout works well; chapters take you through theory to practical applications and mention problems and solutions along the way. It is clear that it has been written by people who have hands on experience of MR and who have had to deal with the issues associated with quantification in all forms of MR use (diffusion, magnetisation transfer, spectroscopy, contrast enhanced MRI, functional MRI, blood perfusion and volume estimation, and the various practicalities associated with analysing images, to mention just some of the topics covered).

The usual pitfalls of multiauthor books have been avoided as Paul Tofts is involved in the writing of many of the chapters and the book has the coherence of a single author book. The style of writing is occasionally poetic, for example: “the paradigm shift from qualitative picture-taking to objective measurement-making is taking place”, which elegantly summarises the theme of the book.

I have to mention the introduction, which might have been written by Melvyn Bragg and at first seems a little out of place in a science textbook and more fitting to a book on the arts. It references Stravinsky, John Cleese, Bronowski, and Rachmaninov, among others, and speculates about the nature of creativity: “Sometimes I seemed to be watching the creation of perfection”, writes Paul Tofts. I smiled to myself when I first read this but having looked at this book in greater detail, I think he might have a point.

If you are involved with MR imaging in any way I urge you to look at this book, and once you have, you will know that you need to have it and you will want it for its sheer comprehensiveness, and the knowledge that quantification in MR imaging is truly at the cutting edge.

Neuroscience in medicine, 2nd edn


Neuroscience in medicine, second edition, is aimed primarily at medical students and seeks to explain the basic structure and function of the nervous system underlying medicine. It is arranged as a collection of essays by individual contributors, interspersed with short clinical chapters. Most of the chapters are written at a level appropriate for medical students but others (for example, those on hypothalamus, muscle, and ion channels) carry detail more suited to a neuroscience undergraduate or even postgraduate student. While it is no bad thing to offer students more information than they strictly need, it does need careful management in order to avoid a fascinating subject becoming a daunting one.

In terms of coverage, it is refreshing that subjects such as sleep, cerebrospinal fluid, and neuroimmunology are dealt with individually, as these tend to be minimised or overlooked in some textbooks. However, there are also some serious omissions. There is no chapter explaining the structure and function of the autonomic nervous system, surely one of the topics most often misunderstood by medical students. Also, parts of the motor system are described in several chapters but no attempt is made to show how it all fits together. The order in which subjects are dealt with is unusual. For example, chapters on synaptic transmission and receptors come early in the book while neurotransmitters and their receptors, for example, are placed as chapter one. Spinal mechanisms for control of muscle is divorced from the other chapters dealing with either spinal cord or other motor functions, being placed between chapters on the thalamus and chemical messenger systems.

Perhaps the greatest disappointment is the illustrative material, which varies considerably from chapter to chapter. While some contain effective explanatory diagrams, others have figures of poor quality (apparently due to scanning at low resolution, as in the chapters on spinal cord and higher brain function). The chapter dealing with neuroanatomy relies on a few black and white photographs of cytoarchitectural and histological sections—no diagrams or MRIs.

In summary, when compared to its many competitors, this book is unlikely to appeal to its intended audience. Sadly the generally high quality of the individual contributions is not sufficient to compensate for the poor organisation and variable illustration of this book.

Local therapies for glioma: present status and future developments


This small book, which is a supplement of Acta Neurochirurgica, represents the proceedings of a meeting held in Milan in 2003. It is organised by the EANS Neuro-oncology Executive, which is chaired by Professor Westphal. The point of the meeting was to describe the concepts and status of local therapies for glioma. Owing to the inevitable failure of surgery, chemotherapy, and external beam radiotherapy to prolong life in malignant gliomas, an increasing research and pharmacological effort has been put into developing local therapies for gliomas.

The rationale for placing compounds or therapies in the cavity created following resection of a glioma is that they set the scene for the latest novel local therapeutic approaches. They provide a solid, practical background for the subsequent chapters. The article on awake craniotomy in particular has thoughtfully and useful information for those interested in the technique.

A variety of local therapies are covered in subsequent chapters. Some of these are well known techniques that simply involve local deposition of a chemical substance (for example implantable drug releasing biodegradable microspheres for local treatment of brain glioma and intracavitary chemotherapy for glioblastoma, present status and further directions), which have already reached clinical practice after phase III trials. The particular difficulties with local gene therapy for gliomas are well covered in two succinct chapters, which are comprehensively referenced. Other chapters describe novel approaches using specific techniques (for example non-invasive transcranial high intensity focused ultrasound (HIFUS) under MRI thermometry and guidance) for the treatment of brain tumors. Radioimmunotherapy in the treatment of malignant glioma, clinical and experimental findings; radioimmunotherapy targeting fibronectin; and comparing monoclonal antibodies and small peptide hormones for local targeting of malignant gliomas). The use of convection enhanced delivery techniques are described for the delivery of IL4 pseudomonas exotoxin (NBI-3001) for treatment of patients with recurrent malignant glioma, together with interim findings from ongoing phase 1 studies of IL3-PE38QQR for treatment of the same condition.

The remaining chapters reflect the editors’ particular interest in glioma cell invasion, the potential use of anti-angiogenic therapies, and stem cells in neuro-oncology. Pathophysiological advances in these areas could provide the basis for novel local therapies in the future.

What does this book offer the neurologist interested in oncology? Firstly, there are some good overviews of the current state of treatments, their evidence base, and the way in which surgery and radiotherapy are likely to change in the not too distant future. The second group of chapters on true local therapies for glioma.
therapies gives the reader an idea of the spectrum of current approaches, their biological basis, the simplicities and difficulties of their applications, and innovative thought of the developers.

Overall this is a compact book that is well written. The authors represent their topics from an extremely practical viewpoint, being helpful and honest about the difficulties confronting clinicians in malignant glioma management. All chapters are easy to read, well illustrated, and well referenced. For those interested in neuro-oncology it is a very useful reference source that covers a gamut of approaches, and overall has something for everyone interested in neuro-oncology. The editors are to be congratulated for their contributions, the selection of authors, focusing on this important and evolving area, and addressing it in a very practical, clinically orientated fashion.

I R Whittle

Neuroepidemiology—from principles to practice

Everyone, at one time or another, feels misunderstood and unappreciated. Epidemiologists are no exception. They get fed up with hearing secondhand opinions that epidemiology is a blunt instrument or that epidemiological investigations don’t allow inferences to be drawn about aetiology. Their hearts sink when they encounter people who believe that its methodology amounts to little more than counting cases. Eventually, exasperation drives them to write a book explaining what their subject is really about. If this was the motive behind Neuroepidemiology—from principles to practice, I hope the authors and editors found the process of writing it therapeutic. Whether practicing epidemiologists, who are identified as a target audience, write this book to those involved in the research that has been done—although other similar accounts of approaches and overall has something for everyone interested in neuro-oncology. The editors are to be congratulated for their contributions, the selection of authors, focusing on this important and evolving area, and addressing it in a very practical, clinically orientated fashion.

P J Kirkpatrick

Biopsychosocial approaches in neurorehabilitation—assessment and management of neuropsychiatric, mood and behaviour disorders

As the title implies, this book is ambitious in its remit, encompassing the complexity of brain injury outcome for the sufferer and the wider community. The acknowledged aim is to highlight the “interaction of biological, psychological and social influences on activity and behaviour” (p 2) by presenting a compilation of information from several research fields to provide a focus for the development of clinical practice.

The 17 papers are grouped into five sections covering assessment, mood and anxiety, behavioural health, relationships, and community services. There is no formal division between sections and, inevitably, there is some overlap. However, cross-referencing between papers is good. Perhaps not surprisingly, the overwhelming emphasis is on outcome after traumatic brain injury (TBI), but depression after stroke and psychosocial effects of aphasia are both covered.

Among the contributions, Tate presents a comprehensive overview of attempts to tease out the respective influence of pre- and post-morbid factors on outcome and draws the conclusion that personality changes are largely independent of premorbid personality. She reminds us that psychosocial factors characterising the TBI population also characterise the age group in which TBI is most prevalent. A review of literature on substance misuse (Taylor et al.) identifies the importance of inter-disciplinary collaboration, noting that rehabilitation professionals may lack specific expertise in substance misuse and its treatment. Zasler and Martelli present a useful paper on the effects of mild traumatic brain injury, which are still poorly understood despite their prevalence, but which might have been strengthened by acknowledgement of recent UK work findings (for example King, 1996). In the final paper, Judd presents telling statistics to illustrate the mismatch that still exists, even in developed countries, between prevalence of traumatic brain injury and provision of adequate diagnostic and rehabilitation facilities.

Although quite expensive at £59.95, this compilation of papers serves to emphasise the multi-faceted role of modern neurorehabilitation and largely succeeds in its aim of providing a comprehensive information resource.

J Cockburn

CORRECTIONS

doi: 10.1136/jnnp.2003.026278corr1

In the Letter by Deschauer et al (J Neurol Neurosurg Psychiatry 2004;75:1204–5) the order of authorship is incorrect and should be: M Deschauer, P F Chinnery, S Shanske, S DiMauro, K Majamaa, E Wilichowska, D R Thorburn, S Zierz, A M Schafer, D M Turnbull, R W Taylor.

doii: 10.1136/jnnp.2003.031126corr1

Soragna D, Papi L, Ratti M T, et al. An Italian family affected by Nasu-Hakola disease with a novel genetic mutation in TREM2 gene (J Neurol Neurosurg Psychiatry 2003;74:825–6). The correction in this paper regards the number of the nucleotide of the TREM2 mutation. In the paper the authors wrote that the mutation was at position 191 (191 C→T) in exon 2 of the TREM2 gene. The correct mutation is at position 97 (97 C→T) in exon 2 of the TREM2 gene. The mutation changes glutamine 33 to a stop codon (Q33X); this change is correctly reported in the paper. The authors apologise for the error.

C N Martyn

Neurosurgical re-engineering of the damaged brain and spinal cord

Katayama, on behalf of the Neurorehabilitation Committee of the World Federation of Neurosurgical Societies, has brought together essays presented at a Neurorehabilitation Committee Meeting held in 2002.

Each chapter represents multi-author presentations largely derived from Japan. The manuscript consists of nine subsections addressing aspects of coma, restorative neurosurgery, early rehabilitation, functioning and neural transplantation. The editors have achieved a comfortable balance between scientific and clinical presentation. For example, the first section on monoaminergic and cholinergic pathologies for sleep and wakefulness in the rat model demonstrates elegant physiology, followed by clinical papers that explore median nerve stimulation effects on conscious levels in comatose patients. Both address mechanisms relevant to the reticular activating system. Novel methods for functional imaging of brain abnormalities are well represented, with particular reference to modern MRI sequencing. Specific surgical procedures to reconstitute nerve damage and therapeutic lesioning and muscular grafting for cerebral palsy are also covered.

Finally, there are a number of papers relating to various deep brain stimulators for the control of dystonia, pain, and other movement disorders. From a surgical perspective this is an interesting area showing expansion and considerable promise.

In summary, this volume represents a collection of mostly Japanese papers exploring different aspects of surgical manoeuvres which promise to improve outcome for a variety of brain and spine injured individuals. I recommend this book to those involved in the chronic rehabilitation of central nervous injured individuals and those neurosurgeons who seek subspecialisation in this area.

Reference

1 King NS. Emotional, neuropsychological, and organic factors: their role in the prediction of persisting postconcussive symptoms after moderate and mild head injuries. Journal Neural Neurosurg Psychiatry 1996;61:75–81.

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