

neuropathology and electrophysiology, to explain consciousness. Although the book can be difficult to read (if you do not have a background in philosophy or psychology), much of it is extremely well written and provides insight into phenomena we all experience. I found the discussion on consciousness and sleep particularly interesting, and now understand why certain noises (i.e. the beeping at the crosswalk which sounds just like my pager) in my neighborhood wake me up when I am on call, whereas I am not conscious of hearing them otherwise. The discussions regarding the importance of language to the development of consciousness were also thought-provoking.

The book is not written for the clinical neurologist, and does not offer any guidance in the management of patients with impairments of consciousness. This is not a criticism of the book, as clinicians are not the intended audience.

In summary, this is an excellent, up-to-date review of the study of consciousness. It is well laid out, and follows a logical sequence. The discussions following each chapter are particularly insightful. It is designed for those readers interested in understanding the questions regarding consciousness, but will not be helpful to the clinical neurologist for patient care.

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STROKE THERAPY. 1999. Edited by Leonard P. Miller. Published by: A John Wiley & Sons Inc. 436pp C\$187.50 approx.

Stroke neurology received a big boost with the introduction of an old drug (rtPA) as the first therapy for acute ischaemic stroke. Even as interest has heightened in stroke care, the failure of a lengthy list of neuroprotective drugs has been underscored. Drug development is a complex bench-to-bedside sequence of which few have an intimate knowledge of all the steps. Dr. Miller's book, *Stroke Therapy*, explicitly aims to explain and elucidate the bench-to-bedside science of drug development and trial design in the field of stroke.

This is a multi-authored text with 16 chapters in three sections. The first is introductory with two chapters on the pathophysiology of stroke and animal models in basic stroke research. The second comprises ten chapters, each discussing one aspect of the ischaemic cascade to neuronal death and potential therapeutic avenues within it. The final section has four chapters discussing stroke trial design, treatment, clinical aspects of peri-operative ischaemia and future directions.

The book covers a large amount of information and, in places, is excellent. Thus, as a reference manual it succeeds and will be useful to the physician with a particular interest in stroke. In its entirety, however, it is slow going, with a lack of consistency of style across the chapters. Many of the authors repeat what the previous authors have said. Where some chapters have a flowing prose, others read like lists. The text is irritatingly marred by glaring typographical errors in the majority of chapters, something that should not occur in this age of automatic spell checking.

Several chapters are worth noting. The introductory chapter, *Cellular and Vascular Pathophysiology of Stroke* by Vaughan and Bullock, is an excellent review which highlights the

important targets for potential neuroprotective drugs. The middle section of ten chapters shows the diversity of potential therapeutic approaches to stroke. Many of these were not imagined 10 years ago. The chapters on NMDA receptor antagonists, nitric oxide and apoptosis respectively all deserve attention. Finally, del Zoppo, Zivin and Miller in their two clinical chapters emphasise the importance of early treatment as the major lesson learned from both the success of the NINDS rtPA trial and the failure of the neuroprotection trials. They imply that the unsuccessful results of neuroprotectant drug trials may not be due to lack of efficacy but instead due to problems with trial design.

Overall, the book contains a plethora of important information that the student, scientist or clinician will use as a background reference. The book looks to the future of stroke care by embracing the vast potential of neuroprotection and encouraging ischaemia researchers to continue to improve trial design. I recommend it for only those with a defined interest in cerebral ischaemia and its therapy.

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DIZZINESS, HEARING LOSS AND TINNITUS. 1998. By Robert W. Baloh. Published by F.A. Davis Company. 256 pages. C\$84.50 approx.

Dizziness, tinnitus and deafness are the three ugly symptoms of the Neurology Outpatient Department, in part because they are perceived as hard to diagnose and usually impossible to remedy. To Dr. Robert Baloh, however, the appearance of such symptoms is welcome as his lifetime works spent characterizing them has induced knowledge and, as a result, understanding. He does a service in transforming his insights into a text which is compact yet comprehensive, clear and authoritative. His approach is traditional – anatomy and physiology; clinical evaluation; diagnosis; and treatment but it is lightened by callout boxes, flow charts and over 80 visual aids in 200 or so pages. The book contains all that a neurologist needs to know in order to replace suspicion of these symptoms by interest and will streamline their analysis and enhance their ability to manage these symptoms effectively. Every neurology department should have a copy of this book for residents and any clinical neurologist who feels a need of any further updating in neuro-otology could not do better than purchase this book.

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OPIOIDS IN PAIN CONTROL: BASIC AND CLINICAL ASPECTS. 1999. Edited by Christopher Stein. Published by Cambridge University Press. 359 pages. C \$133.00 approx.

The editor comments, in the preface to this book, that there have been no recent books that focus on analgesic actions and integrate basic research with clinical applications with regard to opioids. He states that the past several years have seen some exciting research developments shedding new light on mechanisms of opioid analgesia and have stimulated novel

approaches to the treatment of acute and chronic pain. The editor's aim with this book was to gather a group of internationally renowned experts in basic and clinical aspects of opioid actions and pain control. This reviewer believes that the editor has achieved his aim and produced a very interesting and practical book which should be useful to any neurologist or neurosurgeon treating patients with cancer pain or non-malignant pain, particularly neuropathic pain, with opioids.

The first eight chapters deal with the basic science aspects of opioids and include the gene structure and function of opioid receptors, endogenous opioid peptides and analgesia, supraspinal and spinal mechanisms of opioid analgesia, and peripheral mechanisms of opioid pain relief with clinical implications. The very important issue of tolerance and its mechanisms is dealt with, as well as opioid/non-opioid interactions and transplantation of opioid-producing cells. Although this reviewer is a clinician, there is much of interest and importance here from which a clinician can benefit. The last ten chapters deal with the clinical aspects of opioids, specifically the physical and chemical properties, clinical pharmacology and adverse effects. Chapter 10 is a very good overview of the clinical pharmacology and adverse effects of opioids. Specifically, it deals with the importance of the metabolites of morphine and meperidine. It is very good at outlining the excitatory effects of the meperidine metabolite normeperidine. It also very importantly emphasizes the variability in responsivity and individualization that is required in the use of opioids and provides a conversion chart for different opioids.

Chapter 11 is an excellent summary of pre-emptive analgesia by opioids, that is the prevention of postoperative pain by good preoperative and intraoperative pain management. This is an extremely important area and involves the important work of a Canadian, Dr. Joel Katz, of whom we can be justly proud as one of the world's authorities in this area. Chapter 12 deals with the intraoperative use of opioids in a very useful fashion. The following chapter deals with the use of opioids in acute pain. Some small complaints are that it utilizes drug terminology which will be unfamiliar to North Americans such as the use of pethidine for meperidine and paracetamol for acetaminophen. It also perpetuates the issue that morphine is more likely to cause spasm of the sphincter of Oddi. This reviewer knows of no scientific evidence that meperidine is better in that regard and thinks this issue needs to be laid to rest. There seems inadequate emphasis too on the value of subcutaneous injections instead of intramuscular injections (except for meperidine). However, the reviewer judges that these criticisms are minor. A chapter on patient-controlled analgesia (PCA) with opioids again emphasizes individual variability which is important, as emphasized in a previous chapter. The general principles outlined in this chapter are important. There is an excellent chapter by a Canadian neurologist, Dwight Moulin, who is a world authority on opioids and chronic, non-malignant pain. This is an extremely important chapter since opioids are increasingly used in this area and may be the only avenue of relief because other modalities may be ineffective. Here the need for following certain guidelines is employed, but also the safety of opioids and the fact that tolerance and psychological dependency are not major issues with chronic opioid use in non-malignant pain. Dr. Moulin also deals with important issues such as pseudo-

addiction, that is the forging of prescriptions because of inadequate pain relief. A chapter follows on opioids in cancer pain by a Canadian world expert on cancer pain management, Eduardo Bruera and colleagues, and this clearly gives the principles of opioid administration in cancer pain and some of the issues that arise at the end of life. The final two chapters deal with specific areas, that is the use of opioids in visceral pain and the use of opioids in obstetrics. These chapters also are well written and practical.

In summary then, this is an excellent book which combines basic and clinical aspects of opioids in pain control and is good value for neurological clinicians involved in pain management. It is important to recognize that if we are going to help a substantial proportion of our patients with chronic pain, particularly neuropathic pain, one has to become familiar with the use of opioids and the guidelines and principles that are necessary. This book is an excellent resource in this regard.

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FIFTY NEUROLOGICAL CASES FROM THE NATIONAL HOSPITAL. 1999. Edited by Adrian J. Wills, C. David Marsden. Published by Martin Dunitz, London. 165 pages. C\$157.50 approx.

Many generations of Canadian neurologists have attended the Thursday afternoon Grand Rounds at the National Hospital, Queen Square, sitting in the high-backed curved benches of the amphitheater, overlooked by the portraits of Sir Gordon Holmes, Sir Francis Walshe and Sir Charles Symonds. Some years ago, I tabulated over 200 Canadian neurologists who had spent time at the National, so this little volume will bring back many memories, especially with the commentaries by Ian McDonald, Chris Earl, P.K. Thomas and 27 other consultants.

The Thursday case presentations have been so central to the experience of neurological education at the National, each dutifully recorded by the academic registrar, that it is surprising that no previous collection has appeared. Since such rounds have been held on Thursdays since the hospital opened in 1860, the editors point out that this book has been waiting to appear for 140 years.

This small volume captures some of the feeling of those case presentations – succinct, clear and always interesting examples of patients with neurological diseases, followed by a discussion by an expert consultant. The format is not unusual in any academic unit, but here it was always done so well, and perhaps with more preparation and more formality than the Grand Rounds in North America, where a case is often selected from the ward by the resident at any level and that resident, after a night with the books, reviews that case and the literature.

The format in this volume is sharp and succinct as those presentations always were. The essentials of the history are presented in about eight lines. Then the findings on examination are summarized with the relevant laboratory and radiological results. As these appear on the right hand page, you have an opportunity to test your diagnostic skills – and they will be tested! Turning the page, there is the diagnosis and a single page discussion by one of the 30 consultants. The case ends with a