

BOOKS RECEIVED

HEARING: ANATOMY, PHYSIOLOGY, AND DISORDERS OF THE AUDITORY SYSTEM - SECOND EDITION. 2006. By Aage R. Moller. Published by Elsevier. 309 pages. C\$95 approx.

GENERALIZED SEIZURES: FROM CLINICAL PHENOMENOLOGY TO UNDERLYING SYSTEMS AND NETWORKS. 2006. Edited by Edouard Hirsch, Frederick Andermann, Patrick Chauvel, Jerome Engel, Fernando Lopes da Silva, Hans Luders. Published by John Libbey Eurotext Limited. 320 pages. C\$120 approx.

ATLAS OF NEUROSURGICAL TECHNIQUES - BRAIN. 2007. By Laligam N. Sekhar, Richard G. Fessler. Published by Thieme. 1104 pages. C\$405 approx.

THE PHYSIOLOGICAL BASIS AND QUANTUM VERSIONS OF MEMORY AND CONSCIOUSNESS. 2006. By Arthur J. Hudson. Published by The Edwin Mellen Press, Ltd. 220 pages. C\$130 approx.

EXAMINATION OF PERIPHERAL NERVE INJURIES - AN ANATOMICAL APPROACH. 2006. By Stephen M. Russell. Published by Thieme. 178 pages. C\$60 approx.

MEDICAL TECHNOLOGIES IN NEUROSURGERY. 2006. Edited by C. Nimsky, R. Fahlbusch. Published by SpringerWienNewYork. 103 pages. C\$150 approx.

INTEGRATIVE ACTION OF THE AUTONOMIC NERVOUS SYSTEM - NEUROBIOLOGY OF HOMEOSTASIS. 2006. By Wilfrid Janig. Published by Cambridge University Press. 610 pages. C\$200 approx.

NEUROMUSCULAR DISEASE - EVIDENCE AND ANALYSIS IN CLINICAL NEUROLOGY. 2006. By Michael Benatar. Published by The Humana Press Inc. 483 pages. C\$170 approx.

THE EMBRYONIC HUMAN BRAIN - AN ATLAS OF DEVELOPMENTAL STAGES. THIRD EDITION. 2006. By Ronan O'Rahilly, Fabiola Muller. Published by John Wiley & Sons Inc. 358 pages. C\$450 approx.

PARKINSON'S DISEASE - A COMPLETE GUIDE FOR PATIENTS & FAMILIES. SECOND EDITION. 2007. By William J. Weiner, Lisa M. Shulman, Anthony E. Lang. Published by The Johns Hopkins University Press. 278 pages. C\$20 approx.

BOOKS REVIEWED

ADVANCES AND TECHNICAL STANDARDS IN NEUROSURGERY. VOLUME 31. 2006. Edited by J.D. Pickard, N. Akalan, C. Di Rocco, et al. Published by SpringerWienNewYork. 289 pages. Price C\$200.

This book represents the latest in a series which began in 1974 whose goal is to foster collaboration within the European Scientific community, particularly with regards to Neurosurgery, as well as to serve as a medium for further education of neurosurgical trainees. The text is structured in two parts; the first being advances where a basic science topic is reviewed in detail, and the second being the technical standards where the focus is more on surgical techniques.

In the scientific advances section Wirth and Ylä-Herttua discuss "Gene Technology Based Therapies in the Brain". This is an interesting chapter which provides a fair description of the history of gene therapy as well as the concerns regarding this form of treatment and the setbacks the field underwent in the late 1990's. They focus on four main diseases - Parkinson's Disease, Alzheimer's Disease, vascular diseases (vasospasm after subarachnoid hemorrhage and ischemic stroke) and brain tumors. The predominant focus of clinical work is described in the studies for management of brain tumors. Once they have outlined this background they describe the

challenges that investigators in the field face both biologically and socially. It is a very good review of the proposed mechanisms of action and the basic science behind these potential therapies. They conclude their chapter with a discussion of the ethics and the dilemmas facing researchers in the field. They stress that the "normal principle of good clinical research" apply to this field, and I think that this is a fair statement given the controversies that surround this therapy. Overall this is a well written chapter with extensive references for people who want a background in this field.

The technical standards section opens with a discussion of the anatomy of the orbit and surgical approach by Hayek and colleagues. These authors provide an excellent anatomical description of the orbit based on cadaveric dissections. Although the description is very detailed with regards to the orbital viscera, nervous and vascular structures, they could have provided more reference to the figures and labeled some of the figures in more detail. They conclude this chapter with a discussion of the surgical approaches to the orbit. In particular they describe the lateral approach, the superior approach and the hybrid lateral superior approach, which is what they describe as their preference. Overall I think this chapter is well written. It contains a lot of detail but it

could have been enhanced with further images. It certainly does not exceed the quality of anatomical cadaveric dissections described in other texts or in the literature.

The next chapter by Marchall and Civit describe the neurosurgical concepts and approaches to orbital tumors. In general this chapter complements the previous one nicely, however there is some overlap. The benefit of this chapter is that it discusses the various etiologies of orbital pathology and breaks it down to both pediatric and adult age groups. A number of different tumors are described in detail including the presentation imaging natural history and indications for surgery. This is a fairly comprehensive list but reviewed in a succinct fashion. The same surgical approaches are reviewed as in the previous chapter. There are additional intraoperative photographs which help the reader visualize the description provided in the text.

Di Ricco and coworkers provide an extensive review entitled "Endoscopic 3rd Ventriculostomy and the Treatment of Hydrocephalus in Pediatric Patients". In this detailed discussion the authors review the history of endoscopy, in particular *neuroendoscopy*, as well as the *ventricular anatomy and the instrumentation* currently available. This chapter provides extensive references to current literature as well as outlining current indications, pathogenesis and outcomes from treatments for conditions such as aqueductal stenosis, posterior fossa tumors, post-hemorrhagic hydrocephalus, post-infectious hydrocephalus, Dandy Walker syndrome, and hydrocephalus associated with myelomeningocele. They also discuss how to determine outcomes after the procedure, including clinical signs, ICT monitoring and neuro-radiological findings. This chapter is very thorough and detailed in its discussion of this topic, perhaps a little too much so.

Mavorcodatos and Cahana discuss "Minimally invasive procedures for the treatment of failed back syndrome". In this they review the magnitude of the problem, both in terms of prevalence and socioeconomic impact. They review the dilemma of evaluating patients with this condition, including difficulties in history and physical examination. They discuss other diagnostic procedures which can be used to help direct further therapies. At this point in the chapter it becomes unclear whether they still focus solely on failed back syndrome or whether their approach can be applied to low back pain in general as some of the diagnostic procedures described are commonly used in our initial core evaluations. The authors provide a number of algorithms which suggest possible investigation and therapeutic routes for these patients. As the authors are nonsurgeons, they tend to lean more towards percutaneous procedures. They probably could have been a little bit more fair with regards to discussing surgical outcomes for various conditions. With some of these drawbacks kept in mind overall this was an interesting chapter to read.

This edition concludes with a discussion of "The Surgical Anatomy of Calvarial Skin and Bones" – with particular reference to neurosurgical approaches by Fournier et al. In terms of the goals of the book, to help neurosurgical trainees, this is probably the best chapter. It gives a good description of the anatomy of the scalp and calvarium with an excellent discussion of issues that need to be taken into consideration when planning and performing skin flaps for craniotomy. The authors specifically do not go into great detail about any specific pathological processes but rather give an overview of devising surgical approaches.

Overall, this book provides some interesting information but due to its diverse nature, there is no cohesive theme that runs through it. Also the translation into English from the authors' native languages has led to a number of grammatical and spelling errors which were somewhat distracting. Despite this, I think that this is a good book that provides useful information. However, I wonder whether having this compilation together in the textbook at this cost supersedes what is available in other textbooks or in the general literature.

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HOW TO EXAMINE THE NERVOUS SYSTEM. FOURTH EDITION. 2006. By R.T. Ross. Published by Humana Press Inc. 242 pages. Price C\$150.

Written in the voice of a wise and experienced teacher who is patiently seeking to pass on the time-honoured fundamentals of the neurological exam, Dr. Robert Ross's text, now in its fourth edition, contains many neurological nuggets. What shines through is a respect for neurological tradition, the author's clinical acumen and wealth of experience. There is a focus on the details of the neurological exam and interpretation of findings on a *neuroanatomical* basis. Etiological possibilities implied by lesion localization are often included.

Strengths of the volume include concise, clear writing; high-quality illustrations; detailed discussion of individual muscle testing (eg., avoid flexion of the terminal thumb phalanx when examining opponens pollicis strength) with excellent photos and inclusion of many practical hints such as the use of the string test for examining visual fields.

It would have been helpful in the preface to state to whom the book is primarily addressed. Clearly, this is a book for medical students first learning the neurological exam but would be insufficient for Neurology or Neurosurgery residents.

There are several areas where the book could be improved as an introductory text. Disproportionate attention is given to the cranial nerves (120/209 pages) and especially neuro-ophthalmology (86 pages). The organization of the text and chapter divisions are a bit confusing. Some chapter titles are based on systems to be examined and others on symptoms or signs. The first seven chapters might have been better condensed into two: one on the afferent visual system and the second on visuomotor and pupillary function. The chapter on "Disorders of Speech" should be entitled "Disorders of Language" and could have been combined with Chapter 17. Occasionally the terminology is somewhat unusual: "diseases" of a cranial nerve instead of "lesions", "number-writing" instead of "graphesthesia", muscle "size" instead of "bulk", "Adie's syndrome" for the tonic pupil rather than "Adie's pupil".

There is an unevenness of depth at times. For example, there is mention of Stephen's syndrome (from a 1958 publication) at the top of the list of syndromes with CPEO. We read about the rare occurrence of an enlarged pupil ipsilateral to a carotid occlusion due to "ischemic atrophy of the iris", without mention of the much more common ipsilateral oculosympathetic paralysis due to carotid