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Neuroradiology Companion: Methods, Guidelines, and Imaging Fundamentals, 3rd ed.

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consequences of position and axial loading in imaging degenerative disease. For example, it is difficult to argue with the clinical/surgical potential of upright MR imaging, given alterations in appearance of the lumbar and cervical spine when prone-versus-upright images are evaluated.

Book 2 ends with a chapter that details information that could, in the near future, be a major source of nervous system imaging, MR imaging of the peripheral nervous system. Although Drs. Maravilla and Bowen have reviewed this subject elsewhere in the past, this chapter nicely brings together techniques, proper pulse sequences, the microscopic structure of peripheral nerves, the anatomy of the brachial plexus/lumbosacral plexus, and the myriad lesions involving the plexi and peripheral nerves.

Although the price of this 3-volume set of books along with the Internet access is hefty (\$599.00), it saves buying multiple individual textbooks. The material presented is complete, beautifully displayed, and well written. It is considered by this reviewer to be the prime publication resource in MR imaging today.

BOOK REVIEW

Neuroradiology Companion: Methods, Guidelines, and Imaging Fundamentals, 3rd ed.

Mauricio Castillo, ed. Philadelphia: Lippincott Williams & Wilkins: 2005, 428 pages, \$69.95.

Neuroradiology Companion: Methods, Guidelines, and Imaging Fundamentals is the third edition of this paperback book that has slowly become a “must read” for all radiology residents before the start of their first neuroradiology rotation. As in the other editions, the author has achieved the goal of distilling the most basic and important material in neuroradiology into a concise book that can be easily read in a few hours. The book has increased in size from the previous edition by 60 pages; however, the changes made are well worth the additional reading.

The revisions made are primarily focused on the advances in neuroimaging that have taken place since the last edition, most of which have occurred in brain imaging. These changes include a more extensive and updated CT and MR protocols

section to reflect technologic advances and the inclusion of images, data, and facts concerning advanced techniques such as MR spectroscopy, diffusion tensor imaging, MR perfusion imaging, and CT angiography. The section on MR imaging compatibility issues appropriately references MR imaging safety Websites, rather than trying to devise a list of commonly used devices; and the sections dealing with sedation, anxiolysis, and

drugs important to neuroimaging were expanded with discussions on how to manage a patient taking medications that increase bleeding time who requires a lumbar puncture and a patient taking drugs that lower seizure threshold before myelography. There are more than 600 new images.

The book is divided into 2 major parts. Part 1 is entitled “Imaging Protocols and Guidelines” and contains 7 chapters. These chapters deal with CT and MR imaging protocols, myelography, diagnostic conventional angiography, sedation and anxiolysis, drugs important in neuroimaging, and MR imaging compatibility issues. Part 2 is entitled “Imaging Fundamentals” and is divided into 3 sections: “Brain,” “Spine,” and “Head and Neck.” There are 24 chapters that include information on trauma, stroke, nontraumatic hemorrhages, aneurysms, vascular malformations, extra-axial tumors, intra-axial tumors, infections and inflammations, leukodystrophies, metabolic disorders, degenerative and iatrogenic disorders, congenital malformations, neurocutaneous syndromes in the brain section, degenerative disease, tumor and tumor-like conditions, vascular disorders, infections and inflammations, trauma, congenital malformations, brachial plexus in the spine section, neck masses, sinonasal cavities, temporal bone, and orbits in the head and neck section.

Each of the chapters in part 2 includes images of common diseases and entities and lists of key clinical and radiologic facts and provides 1 article for suggested reading. New chapters are those on the brachial plexus, degenerative and iatrogenic brain disorders, and metabolic brain disorders. The chapter “What Study to Order” was eliminated, though I believe this was an extremely useful chapter for trainees.

The major strengths of this book are similar to those of the previous edition and are its high-quality images, a concise text that summarizes key clinical and radiologic facts of each entity, its organized structure that allows for quick localization, and its brevity. This book is valuable for a resident who has had little exposure to neuroradiology. In a few hours, the trainee can experience the full breadth of common neuroradiologic entities as well as learn the important issues regarding imaging protocols and guidelines. The index is extensive and accurate.

There are only a few minor weaknesses. In the MR imaging compatibility section, it would be relatively easy to add a list of those devices that are known not to be safe. Some of the images could have been magnified and would not have resulted in an increase in the number of pages. There is no discussion of the standard nomenclature for lumbar disk herniations, and a few minor mistakes are noted. Figure 21–21 indicates a rightward disk herniation when in fact it is a leftward disk herniation. Figures 16–3 and 16–4 are more representative of adrenoleukodystrophy than “metachromatic leukodystrophy” indicated in the captions.

This companion is highly recommended for residents in radiology, neurology, and neurosurgery. In fact, I routinely recommend this book as a first read for all residents before their first rotation in neuroradiology. I also believe this book can serve as a quick resource for more experienced radiology residents and fellows. It can be used for quick access to imaging protocols and guidelines and can serve as a review before board examinations.

