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Neuroradiology Companion: Methods, Guidelines and Imaging Fundamentals (2nd ed)

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Neuroradiology Companion: Methods, Guidelines and Imaging Fundamentals (2nd ed). Mauricio Castillo, Philadelphia, PA: Lippincott Raven, 368 pp

This text was "primarily written to help the trainee during his/her neuroradiology rotation and thus distills the most basic (and, in many respects, the most important) material in the field." In this regard, the author achieved his stated goal. This book would not only be an asset to medical students and radiology residents, but would also be valuable to neurologists and neurosurgeons. This paperback falls short of being a companion because it is a bit oversized and does not fit in a lab coat pocket.

The book is divided into two major parts. Part I, entitled "Imaging Protocols and Guidelines," is subdivided into chapters according to imaging technique: CT, myelography, angiography, and MR imaging. Pertinent imaging parameters/protocols are discussed for each anatomic region. Patient preparation and postprocedural care is also discussed in the myelography and angiography chapters. In addition to the inclusion of routine imaging protocols, the chapter on MR imaging includes a brief list of devices and implants that may move or deflect in the magnetic field. A chapter entitled "Drugs," lists medications that may lower seizure threshold and bleeding time. Treatment of contrast reactions is also covered. A chapter on sedation discusses several issues, including drug dosages for pediatric and adult patients. The final chapter in Part I, entitled "What Study to Order," lists common neurologic conditions with the most appropriate imaging tool.

Part II, "Imaging Fundamentals," is the major portion of the book, and is divided by traditional lines: brain, spine, head and neck. The section on the brain is divided by chapter into trauma, stroke, nontraumatic hemorrhage, aneurysm, vascular malformations, extraaxial tumors, intraaxial tumors, infection and inflammation, white matter disorders, metabolic disorders, degenerative and iatrogenic disorders, congenital malformations, and neurocutaneous syndromes. The section on the spine contains chapters on degenerative spine, tumors and tumorlike conditions, vascular disorders, inflammation and infection, trauma, and congenital anomalies. The head and neck section contains chapters on neck masses and paranasal sinus, temporal bone, temporomandibular joint, and orbital disease. Each chapter includes images of common diseases and

entities, lists of key clinical and radiologic facts, and provides one article for suggested reading.

The major strengths of this book are its highquality images, a concise text that summarizes key clinical and radiologic facts of each entity, and its organized structure that allows for quick localization of a topic. Another strength is that this book can be read in its entirety in a few hours. This 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.

As the author intended, the text includes only the bare essentials. I found the test on the individual disease entities to be factual and, for the most part, the key points were included. I believe that a short differential diagnosis list could have been included for more of the cases without significantly deterring from the book's brevity. A pertinent differential diagnosis would have added to the learning experience.

Part I could have been a bit more complete by providing more information or clarity on certain topics. For example, the "Drug" chapter lists medications that may lower seizure threshold or increase bleeding time, yet it does not indicate appropriate actions to take (if any) if one encounters a patient taking these medications prior to myelography or angiography. In addition, an important distinction between tachycardia versus bradycardia and severe hypotension was not made in the management of acute allergic reactions. The table concerning the compatibility of common devices and implants and MR imaging is confusing. This table would be most useful if it listed only those implants/devices known to be contraindicated for the MR environment. In addition, lists of all devices known to attract/deflect in the magnetic field, such as ear and penile implants, are incomplete. A noncontrast brain MR for patients older than 12 months should probably include a FLAIR quence.

In conclusion, this companion is highly recommended to residents in radiology, neurology, and neurosurgery. It will allow a radiology resident to function well during his/her early rotations in neuroradiology.