MRI of the Pediatric Brain

Dr. Sener’s MR Imaging of the Pediatric Brain is unusual, but in some ways appealing, in its style and format. It is the only book this reviewer knows of intended primarily to describe “uncommon disorders,” with MR spectroscopy and diffusion MR topics appended as additional chapters. Although that is not an unreasonable premise, the title of the book should have reflected this, so that potential purchasers will not think this is a text that attempts to rival text by Dr. Ball (Pediatric Neuroradiology) or Dr. Barkovich (Pediatric Neuroimaging).

The book is divided into three sections, the first of which illustrates and describes the findings of approximately 100 abnormalities of the pediatric brain. In this section, the author begins immediately with descriptions and with images of a host of developmental abnormalities, including various migrational disorders and congenital brain defects. There is no attempt to describe or illustrate the stages of normal brain development, but again this was not part of the author’s intent. The remainder of the first section includes cerebral manifestations of enzymatic and metabolic disorders, brain infections, cerebral tumors, and vascular disorders. These individual cases are easy to digest, and the illustrations—as opposed to in-depth descriptions of each abnormality—are the primary focus of this material.

The mode of presentation of these uncommon disorders is uncommon but pleasing. Cases are shown and described, and brief discussions titled “Diagnostic Hallmarks” follow. These sections contain basic core information—one may call them “pearls”—that is brief, pertinent, and useful. Although one could complain in some of the cases about the image quality, I found the material in this regard generally satisfactory. Unlike nearly every other text, this paperback book is printed on nonglossy paper, which makes for easy notation in the margins and alongside the images. This takes away the guilt one often feels when writing in a book printed on high-quality glossy paper. Dr. Sener’s book is an invitation to scribble away and underline as you read.

“Proton MR Spectroscopy” (section 2) is set up in an entirely different manner than the larger first section. Here the fundamentals of MR spectroscopy are described along with spectral information related to the major components seen at MR spectroscopy. To this reviewer’s eye, it would have been better to have the spectroscopy information and images and spectra integrated into the case material per se. As presented, this short segment is not particularly useful. The same comments pertain to the third section (“Diffusion MR Imaging”), in which basic concepts of diffusion are mentioned, normal brain diffusion is shown, and its utility in day-to-day imaging is illustrated. Again, it would have been better to integrate this diffusion MR information directly in the case presentations. It is not clear why, for example, an author would choose to show radiation necrosis only in the diffusion section of a book and not integrate the spectroscopic data with it.

On the whole, it appears that Dr. Sener was a bit unsure whether he was developing a book where only interesting cases were to be shown and discussed (as in section 1) or whether this was to be a more standard text (as reflected by sections 2 and 3). As a result, this comes out as an amalgam of both, which is not particularly detrimental to the book. Nonetheless there is good information in this easy-to-read text. Beware, incidentally, that there is no index; rather, the reader must look up a certain diagnosis in the table of contents. The references cited are adequate and for the most part up to date. This book would be worthwhile to consult when a certain abnormality of the pediatric brain is identified and one wants a few facts concerning the topic. Dr. Sener’s book will also nicely serve as a self-quiz for entities infrequently encountered in practice.