Neurosonology and Neuroimaging of Stroke

J.M. Valdueza, S.J. Schreiber, J.-E. Roehl, and R. Klingebiel, eds.
Thieme; 2008, 399 pages, 766 illustrations, \$179.95.

This 399-page book written by 3 neurologists (Drs Valdueza, Schreiber, and Roehl) and 1 neuroradiologist (Dr Klingebiel) is divided into 2 parts. The first deals with the principles of vascular sonography, the application of the sonographic examination to the neurovascular system (intra- and extracranial vessels), the major considerations in intracranial hemodynamics, the pathogenesis of stroke (with vivid MR imaging), vascular pathology of varying etiology and severity, and angiographic (digital subtraction angiography [DSA], CT angiography [CTA], and MR angiography [MRA]) techniques as applied to stroke. With these chapters as baseline information, the authors then nicely illustrate the use of neuroimaging

in 30 different cases, with the emphasis strongly on sonographic evaluation. They divide the case material into 3 categories: low, medium, and high sonographic difficulty.

In most large teaching hospitals and medical centers in America when such sonographic examinations are performed in a radiology department, they are interpreted by those who routinely deal with sonography. Few neuroradiologists have an interest in or

are trained in intra- and extracranial neurosonography. This is a shame because tight integration between MRA/CTA/DSA and sonography is frequently missing. For those who may have an interest in becoming directly involved in neurosonography or who want to see more of this clinical work migrate to neuroradiology and our training programs, this book would serve such individuals well.

The imagery is abundant, crisp, and state-of-the-art. Nearly every clinical case shows correlative imaging, often with 3D reconstructions of vital areas of the vascular system. The examples in the clinical case presentations include the major diagnoses one is likely to encounter, and the written material allows one to follow each case as the imaging unfolds. So, for example, in a case of internal carotid dissection (case 20), the reader is given the clinical presentation and initial neuroradiologic findings. Then questions are posed as to what specific information could be derived from sonography. The case description then explains and illustrates the initial neurosonographic findings (from both extracranial and transcranial duplex sonography), the evaluation of collateral function, the conventional angiography findings, and the clinical course, along with follow-up imaging (predominately neurosonographic). An extensive discussion ends each clinical case, reiterating the critical findings. This template, in general, is followed for every clinical case, and it serves the authors' aims well because it brings to life material described in the first part of the book. An added plus to the book is a CD, which illustrates the case material.

This book takes the neuroradiologist to areas that are infrequently part of his or her daily work. Nonetheless, it covers material that should be part and parcel of techniques we use in evaluating stroke. The book, therefore, is highly recommended for every neuroradiology library, and for those with interest in this field, it would be a wise personal purchase.

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