AJNR

The Stroke Book

AJNR Am J Neuroradiol 2008, 29 (9) e87
doi: https://doi.org/10.3174/ajnr.A1032
http://www.ajnr.org/content/29/9/e87

BOOK REVIEW

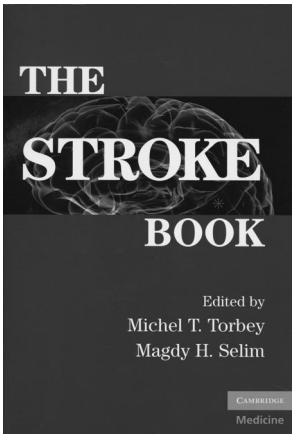
The Stroke Book

M.T. Torbey and M.H. Selim, eds. New York: Cambridge University Press; 2007, 346 pages, 61 half-tones, 48 tables, $45.00.

The Stroke Book was designed to be a "practical reference for anyone involved in managing critically ill cerebrovascular patients." To that end, it has a number of attractive features. It is relatively well organized and comprehensive. It provides a broad range of information grouped into 6 major sections: "Assessment of Stroke Patients," "The Hunt for a Stroke Etiology," "Acute Stroke Imaging," "Management of Stroke Patients," "Stroke in Consultation," and "Prevention of First and Recurrent Stroke." Most chapters are well organized and concise, and the format is user-friendly in that bullet points, charts, tables, algorithms, and summary boxes allow quick access to fundamental information. In addition, the book is well referenced.

Highlights of *The Stroke Book* are as follows: Chapters 1–3 clearly and concisely present a logical approach to examining thoroughly the patient with acute stroke, a nice review of numerous acute stroke-assessment scales, and a thorough description of acute stroke syndromes. Chapters 4–6 systematically review the major etiologies of ischemic and hemorrhagic stroke. Chapters 10 and 11 provide a very logical and efficient approach to evaluating and treating patients with acute and subacute ischemia. Chapters 12 and 13 clearly describe how to evaluate and manage patients with intracranial hemorrhage. Chapter 15 nicely delineates major strategies for treating patients with perioperative stroke. Chapter 17 provides a comprehensive review of pediatric stroke syndromes. Chapter 18 on antithrombotic therapies is also well written.

Unfortunately, *The Stroke Book* also has a number of major flaws. Neuroimaging plays a critical role in the diagnosis and management of patients with acute stroke, and Chapter 7, covering CT in acute stroke, is excellent. However, neuroimaging is otherwise poorly presented. Chapter 8, covering MR imaging in acute stroke, is particularly weak. The incorrect statements are too numerous to count. For example, contrary to what the authors state, CSF does not have the "same attenuation of brain tissue" on fluid-attenuated inversion recovery images, oxyhemoglobin is not "hypointense" on T2 images, diffusion-weighted imaging (DWI) is highly specific in the setting of acute stroke, and pseudonormalization does not typically occur "within days." The discussion of the DWI–perfusion-weighted imaging (PWI) mismatch is inadequate. The authors do not mention which specific perfusion maps (usually cerebral blood flow or mean transit time) are used for the penumbra. Furthermore, the images are suboptimal: all of the diffusion images are distorted (severely elongated) and no apparent diffusion coefficient maps are shown. To demonstrate the penumbra, the authors showed a "PWI" image, which appears to be an echo-planar T2 image. Figure 8.1*A* does not appear to be a T2 image as the authors claim.



In addition to the weaknesses with respect to MR imaging of acute stroke mentioned previously, other flaws in neuroimaging sections are as follows: 1) The use of sonography in acute stroke (covered in Chapter 9) is not put into the appropriate clinical context. The first part of the chapter focuses on sonographic work-up of acute stroke. In clinical practice, sonography is hardly ever used in the work-up of acute stroke. CT and MR imaging are the mainstays of acute stroke imaging because they allow much more rapid and accurate evaluation of the vessels and brain parenchyma. 2) The imaging chapters describe multiple techniques but fail to provide useful algorithms for acute stroke imaging. 3) Imaging of the carotid bifurcation with sonography, CT angiography (CTA), and MR angiography and using them to guide treatment are crucial in the work-up of acute stroke and are not adequately covered. 4) Chapter 12 on intracerebral hemorrhage fails to delineate the important roles of CTA and MR imaging in diagnosis. 5) Chapter 13 on subarachnoid hemorrhage fails to adequately cover CTA, a crucial imaging tool in aneurysm diagnosis. 6) Chapter 14 on dural and cerebral sinus thrombosis incorrectly states that "cerebral angiography has been largely replaced by MR imaging," depicts a poor-quality MR venogram, and fails to cover CT venography, a technique that is superior to MR venography and is the mainstay for imaging dural sinus thrombosis in many institutions. 7) Chapter 17 on pediatric stroke dedicates only 2 paragraphs to imaging and fails to mention CTA and radiation-dose-reduction strategies for CT. 8) Throughout the book, there are too few images, and most are of relatively poor quality.

Additional weaknesses are as follows: There are multiple spelling and grammatic errors throughout the book. The text does not have reference numbers; consequently, the reader is frequently unsure exactly which reference was used by the authors to support a particular statement. The section on intra-arterial recanalization, a very important treatment option, is too cursory. There is no discussion of the management of wake-up strokes.

In summary, this book does provide readily accessible, organized, and comprehensive information relating to the clinical assessment and treatment of patients with cerebrovascular disease. The chapters highlighted previously could be an excellent resource for medical students, medical and neurology residents, and general physicians who take care of patients with acute stroke syndromes. However, in general, with the exception of the chapter on CT imaging of acute stroke, the neuroimaging chapters and sections are very disappointing: They are poorly written and inaccurate, and the images are of inferior quality. For that reason, I would not recommend this book to any radiologists-in-training or attending radiologists. For anyone who uses this book as a reference, I would recommend reading other books to learn about neuroimaging of cerebrovascular disorders.

DOI 10.3174/ajnr.A1032