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Spinal Trauma: Imaging, Diagnosis, and Management

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BOOK REVIEW

Spinal Trauma: Imaging, Diagnosis, and Management

E.D. Schwartz and A.E. Flanders, eds. Philadelphia: Wolters Kluwer Health/Lippincott, Williams & Wilkins; 2007, 440 pages, 779 illustrations, \$149.00.

The quick word of this very new spinal text is easy—it is a nicely done and atypically organized reference book, with very good CT scans and MR images, which goes a few extra yards in educating the interested reader in surgical jargon and techniques and also covers some experimental techniques on the horizon. This has become a very important reference for me, filling a relative void in my library. I might add that I had previously believed that spinal imaging was relatively well represented.

Spinal Trauma is a broad ranging text organized in 3 sections, not along the schema of most radiology texts—"Clinical," "Imaging," and "Experimental." The print is well done on high-quality paper, and the necessary imaging studies are reproduced in excellent quality overall. The index is relatively beefy and easy to use. The chapter organization is somewhat atypical for most imaging texts but still is easy to follow.

The pathophysiology of spinal cord injury and the medical and surgical treatment compose the first section. I found this section to be, arguably, the most useful and reference-worthy. There are focused discussions on a number of classification systems of spinal injury, the neurologic presentation of spinal cord injury, and, quite important for many practicing radiologists, a very useful and well-organized discussion of the sur-



gical management of spinal trauma. Plainly, new age hardware is more complicated than what we have seen, and the application of these "systems" in spinal instrumentation is discussed in a thorough fashion for a neuroimaging physician. My only complaint with this section, which is admittedly picky, is the sometimes pixilated manufacturer's images of hardware. The neuroimaging studies are well done, carefully cropped, and rendered in excellent quality.

The imaging section is organized into a discussion of conventional radiology of the cervical spine and subsequently of the thoracolumbar spine, with additional chapters on MR imaging and pediatric spine and postoperative spine imaging. This is a bit different from many texts, but this section is well incorporated in the entirety of the book and actually works quite well. Normal anatomy and pathology are discussed, and the discussion sections are easy to read, informative, and packed with references. Although the book fashions itself as a trauma text, the normal anatomy sections would work within the framework of any educational endeavor. There are also good discussions of CT technique and physics. I found the image quality to be very very good. MR imaging actually gets a single chapter, which might seem thin to many. However, this chapter is the longest of the book and includes the requisite pathology and excellent images. The images are not only well rendered, but the descriptions accompanying them are quite well done. I do not think this book will replace any of a number of excellent existing MR imaging texts, but for the focused discussion of trauma, it is very good. I was also impressed with an additional chapter in this section entitled "Controversies in Clearing the Spine." There is a considerable variance of opinion on what constitutes a cleared spine, who can do it, and what tests he or she needs performed to be confident. The references in this chapter are carefully discussed and, I think, necessary reading for neuroimaging physicians involved in the management of patients with trauma.

The final section is a brief overview of ongoing new developments in spinal therapies and imaging techniques. Tractography and super high-resolution MR images are included in this section, which many readers may opt out of reviewing. I would strongly encourage not doing this, however. As has often been stated, "Today's research is tomorrow's routine," and the diffusion tensor images included are already being introduced in protocols for follow-up of patients with spinal trauma. The discussion of the principles of anisotropy and diffusion tensor imaging is quite useful reading in an academic setting and increasingly so outside of academia.

Overall, this book is a welcome addition to the existing spinal imaging texts and will be a useful reference addition to any reading room where complicated spine cases are reviewed. I hope the text is issued in a digital format as well, which would increase its utility to many of us. DOI 10.3174/ajnr.A0978