disciplinary approaches, nonnarcotic therapies, the explosion of interventional pain techniques, and the struggles the field of pain medicine has undergone and will undergo. It is fair to say that the editors of this new edition were ready and motivated to capture these changes while maintaining the quality of the original 1953 edition.

The new edition is divided into six parts. The first part—Basic Considerations—explores the history of pain, pain physiology, anatomy, and the role of genetics and psychology in pain. The second part—Economic, Political, Legal, and Ethical considerations, which is a new addition—covers the medicolegal aspects of pain, particularly the legal action that can come with prescribing controlled substances and performing interventional techniques. The third part—Evaluation of the Pain Patient—details the medical and social evaluation of patients, including disability assessment. The fourth part—Pain Conditions—provides an overview of the different pain conditions, including neuropathic pain disorders, musculoskeletal pain, cancer pain, pain in geriatrics and pediatrics, visceral pain, and low-back pain. The fifth section—Methods for Symptomatic Control—reviews the pharmacology of medications used in pain, injection techniques, psychologic interventions, and surgical options. The final part—Provisions of Pain Treatment—discusses the viability of pain medicine, as well as the training and the future of pain specialists.

Bonica's chapters are well organized, have excellent depth, and are quite informative. The online version offers full access, is easy to navigate, and is detailed with excellent imaging. Images are readily transferred for academic presentations. The online full version access of Bonica's textbook is included in the price, unlike the additional fee required by *Wall and Melzack's Textbook of Pain, 5th Edition*[1]; there is no online access for *Raj's Practical Management of Pain, 4th Edition*.[2]

The new edition offers a detailed physiologic basis per chapter, with clear and concise treatments, making this optimal for multidisciplinary pain board review. Review of the *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition*,[3] the examination of the pain patient, as well as functional capacity, disability evaluation, and pain psychology, were well written. The new edition includes topics that pain physicians encounter, such as the role of acupuncture in pain treatment. The headache chapter was much more comprehensive than that in the previous edition and those in the Wall and Melzack[1] and Raj[2] texts. Topics such as thermal radiofrequency ablation, cryoablation, pulsed radiofrequency, and chemical neurolytics were well covered in the newest edition of Bonica's text. The nonsteroidal anti-inflammatory drug chapters of the three major large-volume pain texts had plentiful substance, although the Wall and Melzack book offered numerous tables for individual drug comparisons, making it a little easier to extrapolate the information. The section on spinal cord stimulation, which is a rapidly growing field, was fair compared with those of the other two major texts. However, the 4th Edition of Bonica had superior chapters on peripheral nerve stimulation, cortex, and deep brain stimulation.

The only reservation with the new text is its failure to adequately detail common ultrasound-guided nerve blocks, such as the lateral femoral cutaneous nerve block, genitofemoral, ilioinguinal, iliohypogastric, transverses abdominis plane, and other blocks performed in the clinic. In addition, minimal detail is provided regarding some important topics, such as the comparison of steroids, particulate *versus* nonparticulate, as well as discography and its classifications.

What sets this text apart from the other major texts is the detail provided in each chapter. This is more than a mere reference book and is intended to be truly comprehensive. *Bonica's Management of Pain, 4th Edition*, is truly a well organized, thorough, and easy-to-read textbook. This is an excellent resource for the clinician in residency, in fellowship, or in practice. The detailed chapters, tables, images, and online access make this a complete and reasonably priced edition.

To find a complete textbook that covers acute, chronic, and cancer pain, as well as the multidisciplinary approaches, while adding interventional techniques, is very challenging. This new edition of Bonica's book does a very nice job of covering these issues. I strongly recommend this book as a priceless addition to the library of anyone practicing anesthesia, acute pain, noninterventional chronic pain, and interventional pain medicine.

References

1. McMahon SB, Koltzenburg M: Wall and Melzack's Textbook of Pain, 5th Edition. Philadelphia, Elsevier/Churchill Livingston, 2005
2. Benzon HT, Rathmell JP, Wu CL, Turk DC, Argoff CE, editors: Raj's Practical Management of Pain, 4th Edition. Philadelphia, Mosby-Elsevier, 2008
3. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, 4th Edition. Washington DC, American Psychiatric Association, 2000

Abed Rahman, M.D., M.S., Northwestern University, Chicago, Illinois. docrahman1@gmail.com

(Accepted for publication July 6, 2010.)

Mayo Clinic Atlas of Regional Anesthesia and Ultrasound-guided Nerve Blockade. By James R. Hebl, M.D., Robert L. Lennon, D.O., Editors, Adam K. Jacob, M.D., Hugh M. Smith, M.D., Ph.D., Associate Editors, John V. Hagen, Illustrator. New York, Oxford University Press, 2010. Pages: 488. Price: $125.00.

The application of ultrasonography to obtain real-time visualization of nerves, vessels, needles, and spread of local anesthetic has recently challenged the traditional methods of performing peripheral nerve blocks (PNB) and has prompted numerous

studies to compare their efficiency, efficacy, and safety. Regardless of the method employed, a solid foundation of neuroanatomy is a prerequisite for regional anesthesia. Successful placement of an ultrasound-guided PNB also requires an understanding of ultrasound equipment, principles of sound wave propagation, and scanning techniques to correlate relevant anatomy to its corresponding sonoanatomy. Because of the relatively rapid and recent introduction of ultrasound to regional anesthesia, few currently available textbooks focus on ultrasound-guided nerve-block techniques. The *Mayo Clinic Atlas of Regional Anesthesia and Ultrasound-Guided Nerve Blockade* is a refreshing book that truly lives up to its name as an atlas and provides a concise, informative review of ultrasound-guided regional anesthesia.

The purpose of this book is to be a practical guide to regional anesthesia for residents and practicing anesthesiologists, an overview of ultrasound-guided regional anesthesia, and a review of fundamental principles of ultrasound-guided PNB. The section on ultrasound-guided regional anesthesia consists of three chapters dedicated entirely to the principles of ultrasonography and the application of ultrasound to regional anesthesia, including clear explanations of sound wave propagation and tissue densities, probe selection, and image optimization with changes in frequency, depth, gain, and probe movements (sliding, angling, rotating, tilting, and pressure). These chapters also describe the advantages and disadvantages of in-plane and out-of-plane approaches; use of hydrodissection to avoid nerve trauma from needle contact; employment of color Doppler ultrasound for detecting fluid movement during injection; and common errors, particularly intraneural and intravascular injection. Each chapter in the section on upper extremity and peripheral nerve-block techniques consists of a brief summary of clinical indications for each nerve block; a review of pertinent anatomy; recommendations on patient positioning; description of nerve stimulation technique; and an in-depth explanation of ultrasound-guided techniques, including an evaluation of in-plane and out-of-plane approaches. Each chapter in this section concludes with a discussion of side effects and potential complications. When applicable, the technique of continuous peripheral nerve catheters is also outlined. These focused and succinct explanations, combined with ample images, enable the reader to quickly gain an understanding of basic ultrasound principles and become familiar with various ultrasound-guided techniques.

The use of ultrasonography requires correct interpretation of ultrasound images, and this book, aptly titled an atlas, strikes a perfect balance between text and illustration. The study of sonoanatomy is greatly facilitated by detailed and enlarged anatomical illustrations that are juxtaposed with their corresponding ultrasound images on the same page, allowing readers to easily correlate vessels, tendon, muscle, fascia, bone, and nerve. Drawings of patient positioning, probe orientation, and needle introduction also serve as a guide for readers to improve ultrasound image visualization and ergonomics, especially for those new to ultrasound-guided techniques. In addition, the inclusion of nerve stimulation techniques, with supplemental illustrations of relevant anatomy and surface landmarks, can be helpful for those who choose to employ both nerve stimulation and ultrasound-guided techniques.

One of the exciting aspects of ultrasound-guided regional anesthesia is the potential for new applications and techniques. With the time lapse inherent in the creation and publication of a textbook, it is unlikely that a single book can keep up with the rapid progress of ultrasound application to regional anesthesia. This book does not include descriptions of all potential ultrasound-guided PNB techniques (*e.g.*, paravertebral and posterior lumbar plexus blocks), but, although it is not a comprehensive review, it accomplishes its purpose to provide the necessary groundwork for ultrasound-guided PNB. As novel ultrasound-guided PNB techniques are developed, the challenge remains for the clinician to stay informed of the latest innovations.

Although many questions about ultrasound-guided regional anesthesia techniques remain, the application of ultrasonography has revolutionized the practice of regional anesthesia in a relatively short time and is here to stay. The *Mayo Clinic Atlas of Regional Anesthesia and Ultrasound-Guided Nerve Blockade* effectively summarizes the available ultrasound-guided PNB techniques to date and makes a timely entrance as an excellent resource for residents and clinicians. Indeed, the common adage, "a picture is worth a thousand words," applies seamlessly to this atlas.

T. Edward Kim, M.D., Veterans Affairs Palo Alto Health Care System, Regional Anesthesia and Perioperative Analgesia Service, Palo Alto, California. tedward.kim@va.gov

(Accepted for publication July 1, 2010.)