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Ultrasound Evaluation of Focal Neuropathies: Correlation with Electrodiagnosis. Edited by Jeffrey A. Strakowski, M.D. New York, Demos Medical Publishing, 2014. Pages: 473. Price: $178.00.

Recent advances in ultrasound technology and greater affordability of high-end and high-resolution ultrasound machines have resulted in an increase in the use of ultrasound technology for an increasing number of diagnostic and interventional procedures. Comprehensive evaluation and understanding of focal neuropathies continue to present challenges to diagnostic neurology, particularly in clinical scenarios where etiology is unclear and definitive diagnosis has not been established, therefore delaying optimal treatment. The incorporation of high-definition ultrasonography into clinical practice has taken the ability to view discrete *in vivo* morphology of peripheral nerves, muscles, soft tissues, and compartments, virtually at the bedside, to an unprecedented level. It has also enabled static and dynamic assessment of the musculoskeletal and peripheral nervous systems, as well as evaluation of vascular flow both in healthy and abnormal nerves.

In his new volume of the book, *Ultrasound Evaluation of Focal Neuropathies: Correlation with Electrodiagnosis*, Dr. Jeffrey A. Strakowski combines musculoskeletal and neural sonoanatomy with clinical assessment and electrophysiology correlates. Dr. Strakowski points out that the goal of this volume is to highlight the contribution of diagnostic ultrasonography to clinical assessment and judicious use of electrophysiologic testing. The book delivers on the author's promise to provide a framework for better understanding of the incremental contribution of ultrasonography to the clinical and electrodiagnostic evaluations in a range of peripheral nerve diseases.

The book has 473 pages, 15 chapters, 90 clinical images, 319 ultrasound images, 78 illustrations, 38 tables, and 153 video captions; the index is accurate and helpful.

Chapter 1 is an introductory text where the author lays out the anatomical foundation of the dermatomal and segmental innervation of the trunk and extremities, including a useful table of recent anatomy terminology changes.

In chapter 2, the author provides a brief and informative review of electrodiagnostic assessment of peripheral neuropathies for nonspecialists with some guidance on interpretation of results.

Chapter 3 is dedicated to clinical use of high-frequency ultrasound, discussing the foundation of ultrasound application, principles of image acquisition, optimization knobology, and other useful tips. An excellent section on ultrasonography of different tissues offers well-organized basic information and entry instruction for novice and intermediate users alike. Abundant video captions are introduced in this chapter that complement the text and still images with dynamic illustrations of normal neuromuscular sonoanatomy.

Ultrasound evaluation of peripheral nerves is the subject of chapter 4 in which the author features a range of images outlining sonograms of normal-appearing peripheral nerves in short and long axis, as well as a concise overview of nerve compression findings. The concept and significance of assessing nerve perimeter, cross-sectional area, and flattening ratios are briefly introduced here as well.

Chapters 5 to 14 detail normal anatomy, innervation, and ultrasonographic appearance of plexuses and peripheral nerves from the brachial plexus and thoracic outlet to terminal nerves of the lower extremity. In addition to normal sonoanatomy, each chapter describes several well-developed case scenarios where directed ultrasonography diagnostically complements the clinical manifestations and electrophysiologic findings in a wide range of neuropathies, predominantly centered on those originating from trauma. The chapters dedicated to the radial, median, and ulnar nerves are thorough and reflect the author's exhaustive experience, abundant published literature, and collective knowledge on the subject. The section on sciatic nerve assessment in chapter 10 combines static and dynamic musculoskeletal and neural imaging.

Overall, the featured images are of relatively high quality; however, some could have benefitted from selective contrast and structure postproduction for better detail. The didactic rigor of some clinical photographs in the book would have been further enhanced if the operators in the images wore gloves for barrier protection. Most chapters also feature illustrations, which are instructional, but we found them too basic. The video images are well selected, appropriately referenced, and significantly enhance the educational experience. All literature cited appears to be relevant and up to date.

Chapter 15 focuses on future directions for neuromuscular ultrasound use and peripheral nerve diagnostics, including short, informative sections on elastography and extended field of view technology, the potential role of three dimensional imaging, spatial compound imaging, and harmonics. The call for standardization in practice, education, and training is justified and timely.

In summary, *Ultrasound Evaluation of Focal Neuropathies: Correlation with Electrodiagnosis* is a useful addition to the growing portfolio of didactic material on the utility of ultrasound in imaging and diagnostics of peripheral nerves. This book should be useful for anyone interested in musculoskeletal and neuropathology. Likewise, anesthesiologists specializing in regional anesthesia and pain medicine can also benefit from the well-organized anatomical information in the book and accompanying videos.

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