

Review of Ultrasound Imaging for Regional Anesthesia: A Practical Guide

Vincent W. S. Chan, MD
Toronto. 2nd ed. 2008
206 pp. \$50 CDN plus shipping
Order from *usra.ca*

Accepted for Publication: August 7, 2008

Vincent Chan's new book is an important advance in ultrasound (U/S)-based regional anesthesia. The book should be invaluable for beginners and very useful for users already adept with U/S guidance.

Dr Chan begins with a glossary of U/S terms followed by a concise summary of U/S physics and image production. Ultrasound machines from the 3 major manufacturers are depicted with important features labeled, including "knobs and buttons." Probe selection and handling are discussed. The basics of single-shot and continuous catheter placement with U/S are nicely presented. The introduction concludes with a very up-to-date list of outcome studies related to U/S-based regional anesthesia.

The book is organized by anatomic region. Each section begins with a short synopsis of anatomy with line drawings and diagrams. Individual nerve blocks are presented with U/S images juxtaposed with line drawings or anatomical specimens in cross section, with relevant structures well

labeled. The reader will appreciate that medial/lateral is marked on all images. All blocks are classified as *basic*, *intermediate*, or *advanced* skill level. Each nerve block is described in a logical sequence. Dr Chan emphasizes the importance of a "systematic anatomical survey," moving the probe proximally and distally to confirm the identity of structures on the screen. For most blocks, both in-plane and out-of-plane approaches are described. The major exception is the supraclavicular block, where the proximity of the clavicle to the probe, together with the closeness of the pleura, makes an out-of-plane approach more or less untenable.

This book covers not only the standard techniques, but also a myriad of blocks that have become feasible with U/S. Blocking individual nerves (eg, radial, ulnar, median) in the arm and forearm is covered thoroughly. Although these were once considered just "rescue blocks," with U/S, distal blocks can now be used alone for minor hand surgery. Dr Chan's exemplary description of the U/S-guided supraclavicular block is quite timely, because this block is fast becoming the mainstay for major elbow, wrist, and hand surgery. Other exciting newer U/S blocks covered in the book include saphenous nerve both above and below the knee, obturator nerve, ilioinguinal/iliohypogastric blocks, and U/S-guided ankle block. These blocks may open vast opportunities for U/S-based regional anesthesia.

The last section describes the use of U/S for adult epidurals and subarachnoid block. For this application, the U/S strategy is a bit different. Ultrasound is used to map the sonoanatomy. Bony landmarks are identified, and the desired level is marked. The distance from skin to dura is measured with U/S. After this U/S preassessment, the probe is set aside, the skin prepped/draped, and the block proceeds traditionally, with either loss-of-resistance (epidural) or cerebral blood flow (subarachnoid block) as the end point for needle insertion.

The book is compact and will fit in the pocket of a laboratory coat. The spiral binding permits opening the book flat to allow viewing during a procedure. This pioneering text does not have a publisher. The book is distributed via the *usra.ca* Web site. Anyone with a PayPal account (via eBay) can have a copy mailed directly to their home or office. For those residing outside Canada, the price will vary somewhat with the Canadian exchange rate. At less than US \$60 and delivered within a week when ordered online, this book represents an incredible value for anyone interested in using U/S for regional anesthesia.

Richard K. Baumgarten, MD
Department of Anesthesiology
Wayne State University
Detroit, MI