

Invitation to start scanning

Reviewed by Andrew Hilton

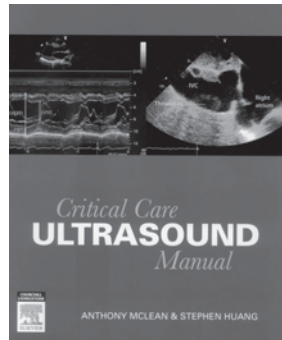
Critical care ultrasound manual. Anthony McLean, Stephen Huang. Sydney: Churchill Livingstone/Elsevier, 2012 (208 pp, A\$108.00). ISBN 9780729540933.

The evolution of affordable, portable, point-of-care ultrasound technology has contributed to the rapid growth of treating physician-performed ultrasound in many disciplines. Critical care ultrasonography encompasses echocardiography and vascular, lung and general ultrasonography that is relevant to the point-of-care management of the critically ill. In many European countries it is a well recognised practice and integrated into the training of critical care physicians. Training in critical care ultrasonography in North America and Australasia has lagged in comparison and, in order to fill that void, many courses, workshops, online resources and texts have flourished.

McLean and Huang's text is based on their international Rapid Assessment by Cardiac Echo (RACE) course, but can stand alone as a practical introduction to critical care ultrasonography. Its content is organised into two main parts: basic (Level 1) transthoracic echocardiography, which is the content of the basic RACE course; and vascular, lung and abdominal ultrasound pertinent to critical care (RACE+).

The *Manual* provides a clear, simple and practical framework for rapid haemodynamic assessment in the acutely ill patient. It addresses four areas: left heart function; right heart function; presence of pericardial effusion and possible tamponade; and intravascular volume. There is no intent to teach a comprehensive transthoracic echocardiogram (TTE) examination, and it only utilises two-dimensional and M-mode scanning modalities, with explicit acknowledgement of the absence of Doppler techniques including colour flow imaging.

The chapters on vascular, lung and abdominal ultrasound are concise, with useful diagrams and practical basic instruction in these techniques. In particular, the chapter on



ultrasound-guided vascular access valuably highlights imaging pitfalls that may mislead the beginner (and experienced) practitioner when performing this potentially complicated procedure. An accompanying DVD contains examples of both basic TTE and general ultrasound imaging.

Deficiencies in the *Manual* are minor, given its intended target audience and scope of practice. The use of M-mode measurement is limited, relies on geometric assumptions and may confuse the beginner, though the *Manual* does highlight these issues. The absence of instruction in Doppler modalities may frustrate some, but a basic exposition of Doppler ultrasonography is presented in the appendix. The chapters on Focused Assessment with Sonography in Trauma (FAST) and abdominal ultrasound could benefit by more examples being provided on the DVD. In particular, a demonstration of the effect of changing scanning planes at each abdominal position, and the examination of the gall bladder and kidneys would greatly complement the text.

For those of us who teach ultrasonography, this is a sound text around which to develop an ultrasound education program for critical care trainees and consultants. It is appropriately modest in scope, has a clearly delineated curriculum and acknowledges its deficiencies where more advanced techniques and experience are required. But most importantly, its reassuring style and clarity of exposition invites the beginner to pick up the transducer and start scanning.

Andrew Hilton, Head

ICU Ultrasonography, Austin Hospital, Melbourne, VIC.

Correspondence: Andrew.hilton@austin.org. □