

will likely perform a limited number of described techniques; the physician who inserts continuous nerve catheters, for example, may not perform elbow steroid injections for chronic pain. Nevertheless, the text is a useful addition to the library of any physician who uses, or aims to use, ultrasound to perform pain-management related procedures. Admirably, the text acknowledges the real limitations of sonography, including limited resolution and artifacts, and it effectively compares ultrasound use with current imaging modalities for each technique. It urges physicians who use these techniques to seek formal mentorship so ultrasound enhances safety and so the recipients of these approaches are helped—and are not harmed—by the ever-expanding application of this technology. Both patients and providers would benefit from a more rigorous examination of the education and training required to demonstrate competency in these techniques. To that end, a useful addition to the text would be an interactive media component to facilitate learning the complex multidimensional anatomy at hand. Inclusion of such would only enhance the ‘atlas’ designation of the text.

Mona Kotecha, M.D., Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire. mona4304@gmail.com

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Clinical Manual and Review of Transesophageal Echocardiography, Second Edition. Edited by Joseph P. Mathew, M.D., M.H.Sc., Madhav Swaminathan, F.A.S.E., F.A.H.A., Chakib M. Ayoub, M.D. New York, McGraw-Hill Companies, Inc., 2010. Pages: 656. Price: \$145.00.

Clinical Manual and Review of Transesophageal Echocardiography, Second Edition is a comprehensive text with multiple images and in-depth discussions of the application of transesophageal echocardiography (TEE) in a variety of clinical scenarios inside and outside the operating room. This book’s intended audience is not limited to the field of anesthesia. As mentioned in the preface, this book is also an excellent source of information for the cardiologist, cardiac surgeon, intensivist, and the emergency department physician.

The first section of the book addresses the basics of TEE. The topics range from the physics of ultrasound to the basic TEE examination, and to more commonly encountered anatomic variants and artifacts. The chapter that describes the controls on the ultrasound machine has many TEE images representative of how manipulation of a certain control changes the picture and is most helpful in understanding how to optimize the image acquired. The chapter entitled Quantitative Echocardiography, which includes applications of Doppler technology in the assessment of stenotic *versus* regurgitant lesions (specifically the proximal isovelocity surface area, or PISA, method) and equations necessary for intracardiac pressure measurements, is a detailed yet compact

introduction to subsequent sections in which various pathologies are addressed individually.

The second section reviews all of the valvular disorders and prosthetic valves along with left ventricular diastolic dysfunction, right ventricular function, and cardiomyopathies in great detail. Although a separate chapter on mitral valve repair, focusing on different surgical techniques and concerns, is particularly useful in understanding the surgeon’s perspective, there is repetition of inconsistent information regarding the anatomy of the mitral valve. For example, chapter 7 on the mitral valve mainly classifies chordae tendineae as primary, secondary, and tertiary, whereas chapter 8 on mitral valve repair draws attention to the difference between commissural chordae and leaflet chordae, further dividing them into three groups: paramedial, central, and paramedial. This causes confusion as these two consecutive chapters are reviewed.

The third section covers miscellaneous scenarios, such as aortic surgery, heart failure surgery, congenital heart disease, and cardiac masses. The chapter on heart failure surgery, which explains concerns and considerations regarding heart transplantation and ventricular assist devices, is particularly thorough and well organized. The chapter on epicardial and epiaortic echocardiography, with multiple pictures representing every imaging plane described in the text, is very informative. This section concludes with a chapter that discusses TEE as a diagnostic and a monitoring tool during noncardiac surgery.

The fourth section consists of two chapters discussing TEE’s role outside the operating room, specifically in the critical care unit and in the emergency department. They focus on the causes of hemodynamic instability, along with chest trauma, aortic dissection, and aortic disruption.

Advances in echocardiography are discussed in the fifth section. The newer technologies included are three-dimensional echocardiography, contrast-enhanced ultrasonography, strain rate, tissue strain rate, and two-dimensional speckle tracking echocardiography. This chapter is the most difficult to read due to the highly technical information about these emerging modalities. The authors acknowledge that more research is needed before some of these technologies are routinely applicable to the clinical setting. This last section also includes information regarding training and certification in TEE.

Appendices provide easy access to many tables that include information regarding normal chamber dimensions and several parameters used in determination of the severity of certain disorders. This section also summarizes the methods and equations used in quantitative echocardiography. Normal Doppler values of prosthetic valves are also grouped under this section.

The educational component of this book must be mentioned. There are multiple questions at the end of each chapter, with answers (some with lengthy explanations) at the end

of the book. In addition, there is a CD attached with 150 questions, 50 of which are video based.

The numerous echocardiographic images that complement the text are impressive in their clarity. These images make the text much easier to read and understand. For example, chapter 12 uses these pictures in abundance when demonstrating the grading of left ventricular diastolic dysfunction. Chapter 5, while reviewing the recommended tomographic planes, uses not only echocardiographic images but also anatomic representations illustrating how an imaging plane cuts through the heart, for better three-dimensional understanding of the particular view obtained.

The text gives useful tips regarding the manipulation of the TEE probe for better image acquisition and also technical recommendations for more accurate Doppler imaging. As the text focuses on technical aspects of TEE examination of cardiac pathologies, the physiology, pathophysiology, and treatment options are integrated into its content as

appropriate. This approach provides a thorough understanding of the pathology being discussed in that particular chapter.

This book is by no means a quick read for a sonographer who might be looking for brief guidance in his or her clinical practice. However, it is a comprehensive review book for those who want to be certified in TEE and invaluable educational material for teaching through the many questions provided both in the book and in the accompanying CD. Aiming to enhance not only the skill but also the knowledge level for more accurate decision-making in the surgical and nonsurgical setting, this book is an invaluable reference text for the practitioner who routinely performs advanced TEE.

Nil Ural, M.D., Loyola University Medical Center, Maywood, Illinois. nural@lumc.edu

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ERRATUM

Lidocaine Metabolites Inhibit Glycine Transporter 1: A Novel Mechanism for the Analgesic Action of Systemic Lidocaine?: Erratum

In the article on page 147 of the January 2012 issue, in the Conclusions section of the Abstract, the word “glycinexylidide” appeared instead of “N-ethylglycine” in two places. The Conclusions section of the Abstract should read as follows:

Conclusions: Although lidocaine does not function directly on GlyT1, its metabolites MEGX and N-ethylglycine were shown to inhibit GlyT1-mediated glycine uptake by at least two different mechanisms. Whereas N-ethylglycine was demonstrated to be an alternative GlyT1 substrate, MEGX was shown to inhibit GlyT1 activity in both primary astrocytes and in GlyT1-expressing *Xenopus laevis* oocytes at clinically relevant concentrations. These findings provide new insights into the possible mechanisms for the antinociceptive effect of systemic lidocaine.

The publisher regrets this error.

Reference

Werdehausen R, Kremer D, Brandenburger T, Schlösser L, Jadasz J, Küry P, Bauer I, Aragón C, Eulenburg V, Hermanns H: Lidocaine metabolites inhibit glycine transporter 1: A novel mechanism for the analgesic action of systemic lidocaine? ANESTHESIOLOGY 2012; 116:147–58