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**TEE: An Interactive Board Review on CD-ROM.** Edited by David S. Morse, M.D., Charles D. Collard, M.D. Lippincott Williams & Wilkins, Philadelphia, 2002. ISBN: 0-7817-3375-8. Price: \$225.

As the popularity of perioperative transesophageal echocardiography (TEE) continues to grow, an increasing number of anesthesiologists are seeking training and certification in the use of this diagnostic method. Currently, the most widely recognized approach to certification is *via* the Examination of Special Competence in Perioperative Transesophageal Echocardiography, administered annually by the National Board of Echocardiography (NBE). To help candidates prepare for this examination, editors Morse and Collard have recently released *TEE: An Interactive Board Review on CD-ROM*. Besides assisting candidates in preparation for the examination, this video-based program is also intended to serve as a resource for others seeking a general review of TEE.

This CD-ROM is contained entirely on two compact disks compatible with either Macintosh (MAC OS 8.0 or higher) or Windows (95, 98, 2000, or NT) operating systems. The foundation of the program is 93 video segments recorded with multiplane TEE. These segments represent the combined work of 17 contributing authors, 9 of whom list an affiliation with Harvard. Each video segment is accompanied by between two and five multiple-choice questions. Morse and Collard have organized this material into three different "modes," named *Contents*, *Key Terms*, and *Exam*. The first two are considered to be "Learning" modes, as the material may be viewed in any order and at any pace. Initiating the *Exam* mode begins a timed test designed to simulate the video portion of the NBE examination.

In the *Contents* mode, the 93 video segments and accompanying questions are organized into 9 chapters dedicated to topics such as normal anatomy, left ventricle, mitral valve, and intracardiac masses. Most chapters were compiled by two authors and contain between 9 and 11 video segments and associated questions. At any time, the correct answers to the questions may be viewed by clicking on a "Check Answers" box. Clicking on this box will highlight correct answers in green and incorrect responses in red. In addition, a short paragraph of explanation is added below the each question-and-answer set along with a reference. Most references provided are to well-known textbooks on echocardiography, such as those edited by Oh, Otto, Weyman, and Konstadt.

Selecting the *Key Terms* mode reorganizes the same 93 video segments into a list of 21 subjects. Included in this list are topics such as imaging artifacts, color-flow Doppler, quantitative echocardiography, and ischemia and segmental ventricular function. When a topic is selected, relevant video clips are presented. Regardless of the mode chosen, the same list of multiple-choice questions always accompanies each video segment, whether they are related to the selected topic or not. For instance if a video segment under the imaging artifacts and pitfalls section is chosen, it is possible that only one of four questions relates to this subject. Like the *Contents* mode, the *Key Terms* mode also allows the viewer to proceed through the material in any order and at any pace with the correct answers to the questions available at any time.

In contrast to the *Contents* and *Key Terms* modes, once the *Exam* mode is initiated, video segments and questions are presented at a predetermined rate. Each time this mode is started, the program creates a test by randomly combining 12 of the 93 video segments, each with its accompanying multiple-choice questions. The user first views the video and questions and then has 60 s to select answers. Following this period, the video segment is presented a second time and an additional 60-s period is given to recheck responses. Once this cycle is completed, the next video clip and questions automatically begin. There is no option to review a previously displayed video. At the

conclusion of the examination, the final score is presented along with a spreadsheet indicating which questions were answered correctly and incorrectly for each video segment. Clicking in this area allows one to return to the desired segment and review the questions, answers, and references.

The editors indicate that the subject matter of this multimedia program is based on the content outline provided by the NBE. Although this outline is quite long and detailed, Morse and Collard have done a nice job selecting video and questions reflecting topics that have been consistently found on the actual NBE examination in recent years. For instance, the chapter on adult congenital heart disease presents a number of different subjects but, appropriately, focuses on shunt lesions at the atrial level. Also, the user has the opportunity to practice hemodynamic calculations such as the derivation of left atrial pressure from echocardiographic data. Assessment of prosthetic valves and analysis of segmental ventricular function are also well covered by this program. The presentation of intracardiac masses and "pseudomasses," such as fatty infiltration of the atrial septum, is excellent. Overall, the *Exam* mode closely replicates the video portion of the NBE examination, providing the user with an opportunity to become familiar with this format.

Although generally an excellent examination review, this program does have a few shortcomings. First, the editors state that an "infinite number" of practice examinations may be taken. In reality, the examinations are comprised of the same video clips and questions seen in the non-*Exam* modes. When I began taking my first practice examination after viewing all nine chapters in the *Contents* mode, I was able to remember enough of the questions to answer many without even viewing the video. Thus, the value of taking multiple, timed, practice examinations diminishes quickly as a user memorizes the limited number of video clips and questions. Second, despite optimizing the display, some of the video segments are too dark. Third, although it is priced like a large medical textbook, the CD-ROM contains much less information in the relatively short explanations provided with each question-and-answer set.

Despite these few shortcomings, *TEE: An Interactive Board Review on CD-ROM* is probably the best current, commercially available board review product available for those seeking to prepare for the NBE perioperative TEE examination. Although it offers little to the experienced echocardiographer and is not a substitute for textbooks or formal instruction, users will find that the video segments and questions in this program closely resemble those found on the NBE examination. As the desire among anesthesiologists for certification in TEE grows, the popularity of these types of multimedia programs is likely to grow with it.

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***The History of Anesthesia: Proceedings of the Fifth International Symposium on the History of Anesthesia, Santiago, Spain, September 19–23, 2001.*** Edited by José Carlos Diz, Avelino Franco, Douglas R. Bacon, Joseph Ruprecht, Julián Alvarez. Elsevier Science B.V., Amsterdam, 2002. ISBN: 0-444-51003-6 (hardbound), 0-444-51293-4 (paperback). Pages: 630. Price: \$180 (hardbound), \$75 (paperback).

Where in the world could one ever find a widely diverse potpourri from 92 international anesthesiologists and historians describing the weird and wonderful history of anesthesia, from sleep induction in the

Asclepion to causes of death among Spanish anesthetists? The answer would be at the Fifth International Symposium of the History of Anesthesia in Santiago, Spain, September 19–23, in the year 2001.

However, for those of you who were reluctant to take a transoceanic flight 8 days after September 11, 2001, the good news is that you can join the adventure without leaving your favorite armchair or beach lounge. This volume is full of such curious discoveries as the history of Croatian anesthesiology, anesthesia depicted in cartoons and comics, anesthesia in philately, and even anesthesia in nummis (the uninitiated will just have to look this one up!).

Beyond the esoteric, there is some seriously historical information in this book. Peter Safar's 14-page, 75-reference chapter on the development of cardiopulmonary–cerebral resuscitation in the twentieth century is weighty indeed; as is Michael Goerig's astute study of the bone marrow as a site for the reception of infusions, transfusions, and anesthetic agents. Rodney Westhorpe gives a concise but complete account of intravenous barbiturates, including 22 chemical structures! One of my favorite sections considers medieval religious history in a chapter about the medical and surgical treatment of the pilgrims of the Jacobean Roads, by C. N. Nemes from Pfaffenhofen, Germany. Also

brilliantly eccentric are the studies in antiquity, including archaeological evidence on the use of opium in the Minoan world, pain relief and sedation in Roman Byzantine texts, and the history of caffeine as used in anesthesia.

There is something to interest everyone, from critical care, regional and obstetrical anesthesia, pain, resuscitation, education, and arts to international and military medicine. If you can't find something in this collection that you really want to stop and read, you are a dullard indeed.

The strengths of this book are its wide-ranging topics, great illustrations and references, and concise but well-packed chapters that tell a story. The price is a bit high, but whoever said that the educated mind is economical? Certainly, this timeless collection is highly recommended for medical librarians, training programs, and of course, the bookcases of the intellectually curious.

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