

Book review

The EACVI Echo Handbook. A Small Tome That Speaks Volumes

Edited by Patrizio Lancellotti and Bernard Cosyns. Oxford University Press, Oxford, United Kingdom; 2016: 588 pages, 212 tables, and 713 figures. ISBN: 978-0-19-871362-3.

The EACVI Echo Handbook, a small pocket guide to echocardiography edited by the European Association of Cardiovascular Imaging of the European Society of Cardiology, recently went on sale. It is also available online at the publisher's website. Being an institutional manual, it includes a large amount of the data from the guidelines and recommendations issued by the society.

The publication is the fruit of the editorial efforts of Patrizio Lancellotti and Bernard Cosyns, with the assistance of 5 editors from different task forces and some 30 leading experts in the European echocardiographic panorama.

The intention of the handbook is clearly to summarize and schematize the subject matter; thus, it is arranged in the form of outlines that allow easy and rapid access to the information, while encompassing nearly all the fields of echocardiography. These outlines are interspersed with numerous images. It is difficult to find an entire paragraph of text. This aspect and the design make the book especially practical.

Although the volume is not exactly light in terms of weight and would not easily fit in a pocket—it is after all a handbook—it will most certainly be a tool to have near at hand in routine echocardiographic practice. It would be interesting to improve on this feature in later editions, and the design suggests that it could be the basis for future applications for mobile devices.

The first chapter explains the use of the settings of the echocardiographic system for each imaging modality, and the second goes on to describe the performance of a normal transthoracic echocardiographic examination with all the different modes, including M-mode, 2D, Doppler, tissue Doppler imaging, deformation imaging, 3D, and chamber opacification with contrast, as well as recommendations for data storage and the preparation of reports. The transesophageal approach is dealt with in the same way.

Parts 4 and 5 are devoted to ventricular function, distributed according to the classical divisions into systolic and diastolic functions. They provide a wealth of detail, accompanied by an abundant profusion of tables with normal values and algorithms for grading systolic and diastolic dysfunction.

A concise section on coronary artery disease is followed by the longest chapter—as could not be otherwise—focusing on valve disease. This part of the handbook starts with aortic stenosis, which is currently the most widespread condition affecting the heart valves and the most difficult to quantify in terms of blood flow and cardiac output. For this reason, a great deal of importance is given to aspects involving the measurement of diameters and velocities, and to the discrepancies between echocardiography and catheterization laboratories. The chapter also describes the different ways of measuring the valve area, as well as grading, follow-up, the performance of stress echocardiography, and different classification algorithms.

The authors provide similar information on the different valve diseases, without exception, starting with stenoses and continuing

with regurgitations. These are given the attention they deserve, including data necessary for surgical indication, follow-up, and treatment according to the European guidelines and recommendations.

The section on prosthetic valves proves to be especially interesting in practical terms. Despite its brevity, the text includes a large amount of information on the types and sizes of prostheses and algorithms for treatment in patients with elevated transprosthetic gradients, including transcatheter prostheses.

The chapter on valve diseases closes with a section about infective endocarditis in native valves, prostheses, and devices. Despite the limited sensitivity of echocardiography for the detection of this condition in the latter 2 groups, the information provided is interesting and is especially adapted to the recent guidelines.

The schematic view is highly useful in the different cardiomyopathies. The authors pay particular attention to clinically relevant problems that pose dilemmas for everyday life, for example, distinguishing between hypertrophic cardiomyopathy and athlete's heart, to which they also devote a special section.

Right ventricle, pulmonary hypertension, pericardial diseases, and heart transplantation are the subjects of other chapters that lead up to a section that, undoubtedly, will be of great interest to intensivists and emergency medicine specialists: the echocardiographic study of the critically ill patient. Here, the authors introduce concepts of lung ultrasound, together with the hemodynamic characterization of shock, and rapid echocardiography protocols for patients in this situation and those who are in cardiorespiratory arrest. The information necessary for the hemodynamic evaluation of patients with ventricular assist devices is also provided.

There is an important chapter on adult congenital heart disease, which includes a brief appendix on more complex congenital heart diseases, sufficient for a publication of these characteristics.

The final chapters study the sources of embolisms and cardiac masses, take a very practical look at the role of the echocardiogram in diseases of the aorta, deal with stress echocardiography and, finally, and focus on systemic diseases and situations such as pregnancy. We would have liked to see a brief section on interventional procedures, although it probably would have gone beyond the scope and purpose of this publication.

In short, this handbook is highly practical and meticulous and would be of interest to a wide range of professionals in and beyond the field of echocardiography, from sonographers to clinical cardiologists interested in knowing normal values, cutoff points, how to relate imaging studies to therapeutic decision-making, etc. It is of special interest to trainees or professionals approaching echocardiography from other specialties.

This is a surprising book that offers a concise but comprehensive coverage of all the situations that can be encountered in routine practice, with the added value of incorporating, so to speak, the institutional point of view of the European Association of Cardiovascular Imaging of our European Society of Cardiology.

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