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Book Review

Manual of 3D Echocardiography Amuthan V. ed. Jaypee brothers medical publishers [P] ltd, New Delhi 2013.

Three-dimensional (3D) echocardiography has rapidly evolved into a useful imaging modality since its advent on the clinical horizon from the research labs about a decade ago. From primarily being considered as a modality which only offered an improved image quality and did not have any major quantitative possibilities, real time 3D echocardiography has come a long way in a relatively short time span. It has been shown to be reliable, reproducible and accurate. Volumetric analysis has been simplified and shown to be comparable to the current gold standard – cardiac MRI. The objectivity introduced, ease of use, coupled with excellent reproducibility has come as a boon for measuring volumes and LV ejection fraction – one of the most useful prognostic parameter in cardiology. In valvular heart disease, 3D derived planimetry of the mitral valve is the current echocardiographic gold standard in mitral stenosis. The repair revolution in mitral valve regurgitation is driving on due to the views provided by 3D echocardiography. In the cath lab too, the percutaneous interventions like transcatheter aortic valve implantation, Mitra-clip, atrial septal defect closure, paravalvular regurgitation closure are all being facilitated by the unique perspectives provided by real time 3D transesophageal echocardiography.

Unfortunately, in spite of the obvious advantages offered by the technique, its use has not spread in the country to the extent possible. The physicians, accustomed over the years to viewing the two-dimensional (2D) images, seem intimidated by the new technique and its nuances. This is partly because of lack of good quality texts dealing with the subject and its application in day to day clinical practice. There has thus been a felt need among the echocardiographers to understand this new modality. This is evident in the interest generated and the attendance in the various workshops conducted on 3D echocardiography.

This book, “Manual of 3D Echocardiography” put together by Dr V Amuthan and his esteemed colleagues, thus could not have been more aptly timed. An eminent cardiologist of the country, Dr Amuthan is an emeritus professor at the Tamil Nadu MGR Medical University, Chennai. He was formerly the head of the department at Madurai Medical College in Tamil Nadu. He is also the Vice President of the Indian academy of echocardiography. Even at this age, he has tremendous interest in the field of echocardiography, particularly, 3D echocardiography, and is a regular at various conferences and events in cardiology. It came as no surprise therefore, that he

thought of taking up this task of writing a manual of 3D echocardiography.

The book begins with chapters on the scope of 3D echocardiography and its various modes. There is a description of equipment and the unique features of 3D imaging like slicing and cropping. The book then moves on to explain the role of 3D echo in various clinical conditions with chapters on rheumatic heart disease, coronary artery disease and congenital heart disease with abundant illustrations and references on 3D transthoracic and transesophageal echocardiography. There are separate chapters on 3D TEE guidance in interventions and on device closure of atrial septal defects, a field where 3D TEE is fast becoming indispensable. At the end of the book, there is an atlas of 3D echo images covering some of the common cardiac conditions such as dissection flaps, masses, aortic root abscesses etc. The book is accompanied by 3 DVDs containing video recordings of the lectures on 3D echocardiography and workshops demonstrating the use of 3D echocardiography in cardiac interventions such as balloon mitral valvotomy.

However, there were just a few points which were worth mentioning. The images in the atlas are not labelled, which makes it somewhat difficult for a beginner to identify the lesions. In addition, a mention of the mode of 3D echo used to obtain these images would have been welcome. In the DVDs, inclusion of 3D clips of various disease states would have been very useful. This would have added to the information needed by the interested readers in understanding the 3D images.

All in all, a good beginning for the texts on 3D echocardiography, in our country!

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