Extended Abstract
Haemodynamics, deformation & ischaemic heart disease

The role of preoperative three-dimensional transthoracic echocardiography in a heart failure patient with a left ventricular aneurysm

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KEYWORDS: three-dimensional transthoracic echocardiography, left ventricular aneurysm.


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FIGURE 1. From the same pyramidal three-dimensional data set, the left ventricle can be visualized using different display modalities: multislice (multiple two-dimensional tomographic views extracted automatically from a single 3D data set) (A) with the addition of a contrast agent (B). Surface rendering display of left ventricle volume in the same patient (C). Volume rendering of mitral valve in the same patient (D).

Case report: We present a patient with ischemic cardiomyopathy and LV aneurysm who underwent Dor procedure, and was preoperatively assessed by real time 3DTTE combined with contrast echocardiography to assess LV, mitral valve function and presence of LV thrombus (Figure 1). Decision point for aneurysmectomy is often finding of LV thrombus. Contrast echocardiography can be used to determine the presence of thrombus using left ventricle opacification method or detecting myocardial perfusion (Figure 1). SVR is often accompanied by mitral valve repair, therefore severity of mitral regurgitation should be carefully evaluated. Significant shortcoming of 3DTTE is the electrocardiographic gating necessary to obtain full volume images and difficulty to acquire images in patients with atrial fibrillation which is often present in these patients.

Conclusion: 3DTTE provides a comprehensive assessment in the management of heart failure patients with LV aneurysm which is crucial for their clinical management.

LITERATURE


