Echocardiography of mitral valve made simple

Samer Ellahham¹, ²
¹Cleveland Clinic, USA
²Cleveland Clinic Abu Dhabi, UAE

The mitral valve apparatus is a complex system. Echocardiography is the primary diagnostic modality for evaluation of mitral valve structure and function. Mitral valve obstruction is caused most commonly by rheumatic mitral stenosis. Less common causes include tumors, mitral annular calcification, carcinoid heart disease and congenital disorders. In the presence of characteristic valvular and sub-valvular structural changes, severe mitral stenosis is associated with a mean transmitral gradient greater than 10 mmHg, pulmonary artery systolic pressure greater than 50 mmHg and a mitral valve area less than 1.0 cm². In patients with rheumatic mitral stenosis who are potential candidates for percutaneous mitral balloon valvotomy, echocardiography is the key to evaluate the likelihood of procedural success. Echocardiography enables quantification of the severity of mitral regurgitation and identification of causes including mitral valve prolapse, flail mitral leaflet, endocarditis, ischemic heart disease, functional regurgitation caused by a cardiomyopathy and rheumatic mitral disease. New modalities of echocardiography add more value in the overall assessment and treatment of mitral valvular heart disease.

samerellahham@yahoo.com

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