



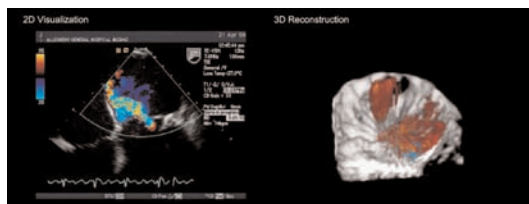
Case Study

Advantage of 3D Transesophageal Echocardiography (TEE) in Assessing Mitral Valve Prolapse

Patient History

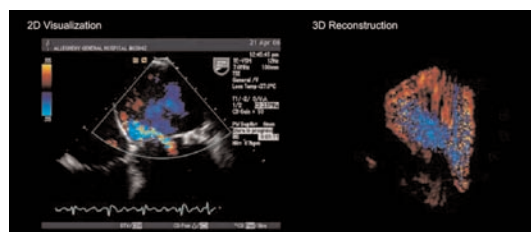
A 58-year-old female presented with exertion-induced dyspnea and palpitations. The patient had a history of mitral valve prolapse (MVP) with mitral valve repair a year earlier. Physical exam revealed a grade III/IV systolic murmur at apex. Mitral regurgitation was confirmed by transthoracic echocardiogram. A 3D TEE study was ordered to more clearly assess the extent and mechanism of the mitral regurgitation.

Image Findings



With 2D echocardiography, only a single regurgitant jet can be visualized.

A 3D en face reconstruction demonstrates multiple eccentric regurgitant jets.



A 3D color Doppler only reconstruction allows visualization of mitral regurgitant volume from multiple jets.



2D measurements permit quantification of PISA (proximal isovelocity surface area) radius and area from a single slice, whereas 3D measurements can provide quantification of PISA volume as well.

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Clinical Outcome

A clear assessment of the mechanism and severity of the patient's mitral regurgitation provided by the 3D TEE study improved diagnostic confidence in planning the surgical repair.

Ultrasound Solution

fourSight™ TEE View enables 3D acquisition, reconstruction and display at point of care. 2D and 3D assessment may be combined with the use of a V5ms transducer to provide complete visualization of complex cardiac anatomy. Reconstruction may be done immediately or at a later date, either on the ACUSON Sequoia™ ultrasound platform or offline with the *syngo*® Ultrasound US Workplace.

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