

# 3D echocardiography as an important diagnostic tool in visualization of commissural prolapse: a case report

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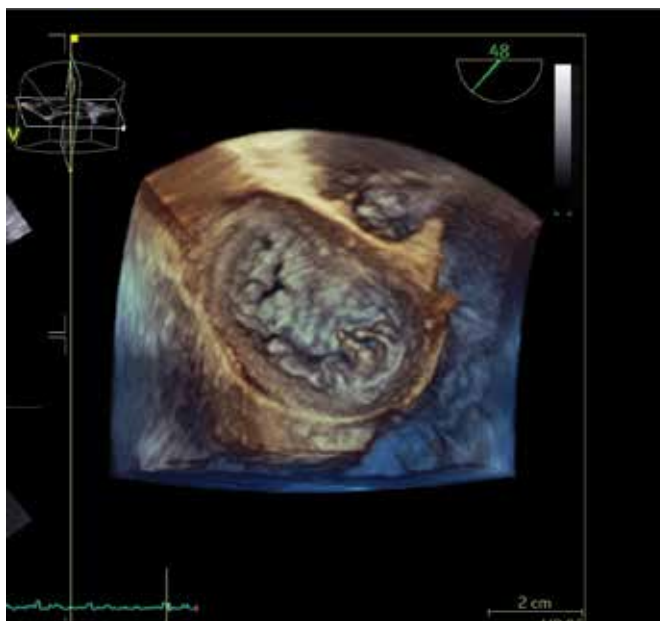
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**Introduction:** Commissural mitral valve prolapse is an infrequent form mitral valve prolapse<sup>1</sup> and it presents a diagnostic challenge for sonographers<sup>2</sup>. However, with new tools such as 3D echocardiography it has become easier to define the proper mechanism of mitral valve regurgitation which is important for preoperative planning of surgical mitral valve repair.

**Case report:** We present a case of a 65-years-old man with a history of arterial hypertension and a new onset of progressive exertional dyspnea and holosystolic murmur in clinical examination. A transthoracic 2D dimensional echocardiography showed severe eccentric mitral regurgitation due to prolapse of posterior mitral leaflet, as is initially described. As exact mechanism of mitral regurgitation was not clear we did 3D transesophageal echocardiography study, and it showed a posteromedial commissure and P3 scallop prolapse with chordal rupture (**Figure 1**) as the most likely mechanism of severe mitral regurgitation. Coronary angiography is performed, and it shows ectatic atherosclerotic coronary arteries with no significant stenosis and the patient is referred to Heart Team and is accepted for mitral valve repair.

**Conclusion:** 3D sonography could have a crucial role in defining the mitral valve mechanism, especially in cases of commissural prolapse as we showed in this case. It is important for planning treatment options especially in case of surgical mitral valve repair.



**FIGURE 1.** 3D echocardiography image shows the mitral valve with posteromedial commissural and P3 scallop prolapse with chordal rupture.

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## LITERATURE

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