

Mitral valve prolapse and sudden cardiac death

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Introduction: Mitral valve prolapse (MVP) is a common condition that affects up to 3% of the population. It is usually benign, but a small subset of patient has an increased risk of malignant ventricular arrhythmias and sudden cardiac death.^{1,2}

Case report: We present a previously healthy 56 years old female patient with history of palpitations. In May 2023, she was hospitalized after out-of-hospital cardiac arrest with ventricular fibrillation (VF) as the initial rhythm. After successful resuscitation, she regained full consciousness. Serum electrolytes were within normal range at admission. Electrocardiogram was uneventful. Echocardiography revealed normally sized left ventricle with preserved ejection fraction and severe mitral regurgitation due to posterior leaflet prolapse (P2 scallop) (Figure 1). No mitral annular disjunction (MAD) was visualized. No heart rhythm disturbances were registered during monitoring. Coronary angiography found no stenosis of coronary arteries. Implantable cardioverter defibrillator (ICD) was implanted for secondary prevention of sudden cardiac death. She was discharged with metoprolol and amiodarone.

On follow up visit no heart rhythm disturbances were noticed on ICD interrogation. The patient is scheduled for cardiac surgery (mitral valve repair or replacement).

Conclusion: Mitral valve prolapse is becoming increasingly recognized as an important phenomenon which can lead to malignant ventricular arrhythmias and sudden cardiac death. We presented a patient who survived sudden cardiac arrest. No predisposing conditions were found other than mitral valve prolapse. The patient is scheduled for cardiac surgery following the implantation of an ICD.

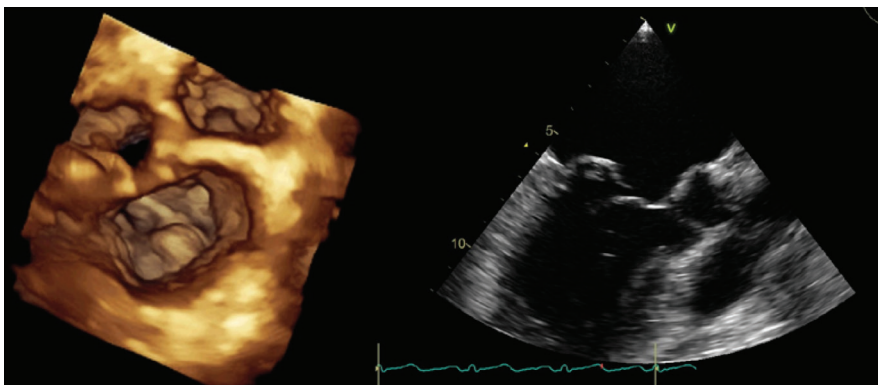


FIGURE 1. Three-dimensional transthoracic and transesophageal echocardiography showing mitral valve prolapse (P2 scallop).

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LITERATURE

1. Sabbag A, Essayagh B, Barrera JDR, Basso C, Berni A, Cosyns B, et al. EHRA expert consensus statement on arrhythmic mitral valve prolapse and mitral annular disjunction complex in collaboration with the ESC Council on valvular heart disease and the European Association of Cardiovascular Imaging endorsed cby the Heart Rhythm Society, by the Asia Pacific Heart Rhythm Society, and by the Latin American Heart Rhythm Society. *Europace.* 2022 Dec 9;24(12):1981-2003. <https://doi.org/10.1093/europace/euac125>
2. Wu S, Siegel RJ. Mitral annular disjunction: A case series and review of the literature. *Front Cardiovasc Med.* 2022 Aug 12;9:976066. <https://doi.org/10.3389/fcvm.2022.976066>