








Mitral annular disjunction as a risk factor for sudden cardiac death – a clinical case of a sudden cardiac death survivor with mitral annular disjunction

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Introduction: Mitral annular disjunction is a rare and poorly recognized condition which involves the separation between the ventricular myocardium and the mitral annulus during systole^{1,2}. Mitral annular disjunction is a risk marker for ventricular arrhythmias and sudden cardiac death and is often associated with mitral valve prolapse.

Case report: 32-year-old female presented to the hospital after successful resuscitation of out-of-hospital cardiac arrest. She has been followed up by a cardiologist, due to mitral valve prolapse and palpitations since age of 15. Echocardiography at admission showed dilated, globally hypokinetic left ventricle, with severely reduced systolic function, thickened mitral valve cusps, bileaflet mitral valve prolapse, with mild mitral regurgitation and without pericardial effusion. Coronary angiography excluded coronary artery disease. Targeted temperature management was maintained. Heart failure therapy have been administrated, as well as antiarrhythmic therapy with amiodarone. Blood samples were sent for genetic analysis were negative for arrhythmias and cardiomyopathies. Cardiac magnetic resonance imaging revealed normal left ventricular dimensions, basal inferoseptal wall hypertrophy, with mildly reduced systolic function of left ventricle. Additionally, mild mitral regurgitation, bileaflet mitral valve prolapse and insertion point of posterolateral annulus 6 mm out of left ventricular myocardium, suggestive for mitral annular

disjunction were shown (**Figures 1 and 2**). There was no late postcontrast imbibition. Furthermore, patient received implantable cardioverter defibrillator for secondary prevention of sudden cardiac death and was discharged with bisoprolol and amiodarone. No neurological deficits remained after the neurorehabilitation.

Conclusion: This case report emphasizes the importance of awareness and diagnosis of mitral annular disjunction, particularly in patients presenting with ventricular arrhythmias, syncope or cardiac arrest. Recognition and diagnosis of mitral annular disjunction, with or without mitral valve prolapse, should be routinely done in practice.

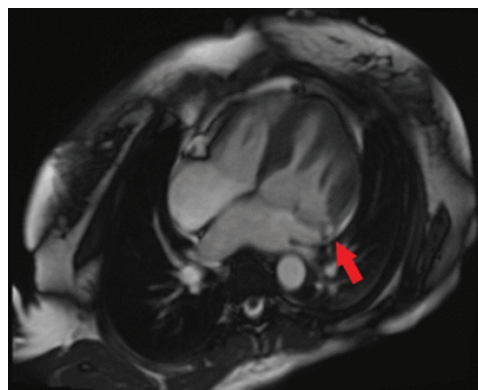


FIGURE 1. Cardiac magnetic resonance (4 chamber view) - separation between the ventricular myocardium and the mitral annulus.

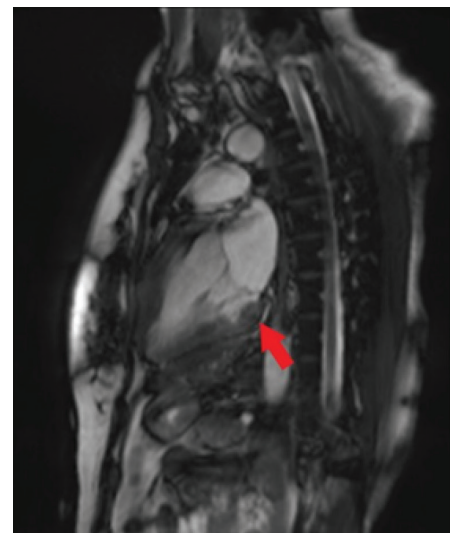


FIGURE 2. Cardiac magnetic resonance (2 chamber view) - separation between the ventricular myocardium and the mitral annulus.

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LITERATURE

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