Introduction: Marfan syndrome is a systemic disorder of connective tissue resulting from a mutation in the fibrillin-1 gene. It is affected myocardial conductivity and predisposes for atrial and ventricular arrhythmias.

Methods: A 27 year old male patient came with chief complaint of frequent palpitations during the last 1-year. He had a history of PVC RVOT ablation in 2010 and 2011. His ECG showed sinus rhythm with incomplete RBBB and no arrhythmia. Echocardiography revealed normal cardiac function with no structural or valvular abnormality. He had above average height, pectus excavatum, scoliosis, long limbs, stretch mark, and hind foot deformity. A systemic score for Marfan syndrome showed a value of 7. Patient underwent an electrophysiology study and showed AV node dysfunction. Programmed electrical stimulation and administration of isoproterenol intravenous evoked multifocal atrial tachycardia from right lower right atrial and left sided. The patient is planned for further evaluation of Marfan syndrome with multidisciplinary team and 3D radiofrequency catheter ablation.

Result: Atrial arrhythmias were rare in Marfan syndrome. It doesn't carry the same risk of sudden death as ventricular arrhythmias but are still clinically significant.

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