Abstract: P593

Cryobaloon pulmonary veins isolation in atrial fibrillation treatment additionally restores repolarization pattern in a patient with vasospastic angina and J wave syndrome

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Topic(s):
Ventricular Arrhythmias and SCD - Clinical

Citation:

Background
Early repolarization syndrome is associated with high risk of cardiac arrest. Atrial arrhythmias and exercise may induce changes repolarization pattern and J wave in inferolateral leads morphology inducing polymorphic ventricular tachycardia (PVT) in response to myocardial ischaemia. Vasospastic angina episodes may occur during atrial flutter and fibrillation episodes. Successful supraventricular arrhythmia treatment may occur an effective resolution of angina episodes and implantable cardioverter-defibrillator interventions. We present an unexpected additional effect of cryobaloon pulmonary veins ablation in a highly symptomatic patient with Prinzmetal’s angina and polymorphic ventricular tachycardias induced upon atrial arrhythmias and exercise with J wave pattern in infero-lateral leads in electrocardiography. The patient was ineffectively treated pharmacologically for many years and occurred asymptomatic after atrial ablations.

Case report
60 year old patient survived the first cardiac arrest in 2010 due to polymorphic ventricular tachycardia (PVT). He was diagnosed with vasospastic angina and J-point elevation = 0.1 mV in all inferior and lateral leads. An exercise test revealed J wave changes and consecutive PVT induction. The patient was treated with quinidine, amiodarone, calcium channel blockers, implantable double chamber cardioverter-defibrillator (ICD), cavotricuspidal RF ablation due to typical atrial flutter. All the procedures were ineffective in diminishing ischemia signs, multiple episodes of vasospastic angina and PVT. The man was coming back with myocardial ischaemia, atrial tachycardias with inadequate ICD interventions, concomitant cardiac arrests and adequate therapies for further 7 years. The fatal ventricular incidents were also proceeded with atrial arrhythmias. Finally, cryoballoon pulmonary veins isolation was performed. We achieved a complete bidirectional conduction block between both right pulmonary veins, a common left trunk and the left atrium. 12 months long observation revealed no angina episodes, no atrial fibrillation nor ventricular tachycardias.

Conclusion
The cryoablation is an effective method of atrial fibrillation episodes treatment. In a case of early repolarization syndrome with high incidence of ventricular arrhythmias it occurred efficacious in regression of vasospastic angina and PVT. Implantation of an ICD and many pharmacological attempts could not solve the problem. The effective treatment of atrial tachycardias prevented not only episodes of mild arrhythmias, but also ischemic events and lethal ventricular arrhythmias.
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