Two different type of atrial tachycardias originating from left and right atrium in lung transplantation patient

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Introduction: Atrial arrhythmias commonly occur following lung transplantation. When medical treatment fails to control the arrhythmia, catheter ablation should be considered.

Methods: We present an unusual case of two different type of atrial tachycardias arising from left and right atriums, respectively.

Result: A 61-year-old male underwent bilateral lung transplantation for pulmonary fibrosis. He had no prior history of arrhythmias or any other structural heart disease. Immediate postoperative period was complicated by atrial fibrillation that proved responsive to antiarrhythmic agents. After 2 months, the patient presented with shortness of breath and palpitation. He was found to be in narrow-complex tachycardia. He failed management with rate-controlling agents and antiarrhythmic drugs. Therefore, the patient was referred for electrophysiological study and ablation. Activation map showed that earliest activation was in the anastomosis around left superior pulmonic vein (LSPV). We successfully ablated this tachycardia at the site of earliest activation. However, another atrial tachycardia was induced. Entrainment maneuvers performed at near the coronary sinus ostium showed post pacing interval equal to tachycardia cycle lengths it was correspond with cavotricuspid isthmus (CTI) dependent atrial flutter. Radiofrequency ablation was performed at the CTI site, which terminated the AFL to sinus rhythm and no longer inducible atrial tachycardia even after administration of isoproterenol. No procedural complications occurred. The patient was free of symptoms and arrhythmia episodes without any antiarrhythmic medication during the 3-month follow-up period.

Conclusion: This case is a rare presentation of two different type of atrial tachycardias originating from anastomosis line of LSPV and CTI dependent reentrant circuit, respectively. Increased risk of AF beyond being inactive.