

Long-term Result of Right Atrial Isolation for Atrial Fibrillation or Flutter in Adult Congenital Heart Disease

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Object: The right atrial isolation procedure was developed by Cox's group at 1988. The method was simple and easy to use for an additional procedure. Some reports presented unfavorable results of right-sided maze procedure for atrial fibrillation with atrial septal defect (ASD). But some presented favorable results of right atrial isolation. In this paper, we present our experience of right atrial isolation and the long-term result with adult congenital heart disease.

Materials and Methods: Since 1998 to 2012, 15 patients (6 men, 9 women) underwent right atrial isolation as a concomitant operation. Documented atrial arrhythmias included paroxysmal atrial fibrillation or flutter (n=9) and chronic atrial fibrillation (n=3). Associated cardiac defect included ASD (n=10), ASD with persistent ductus arteriosus (n=1) with pulmonary stenosis (n=1), Ebstein anomaly (n=1), partial AVSD (n=1) and two chamber of right ventricle (n=1). Diagnoses were based on clinical evaluation and echocardiography. All patients had severe right atrial enlargement revealed on preoperative echocardiography. The procedure included right atriotomy and cryoablation at the level of tricuspid valve annulus. Ages at operation ranged from 25 to 70 years (mean, 54 years). The mean follow-up period was 11.5 years (range, 5 to 19 years).

Results: All but one was free from atrial fibrillation or flutter without medication. One patient underwent a pacemaker implantation with complete atrioventricular block.

Conclusion: Right atrial isolation is a simple and effective procedure that abolishes atrial fibrillation or flutter in adult congenital heart disease.