Surgical Treatment of Arrhythmia for Adult Congenital Heart Disease

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Even in the patients with Ebstein’s disease who lived asymptomatic lives until their adulthood, RV failure rapidly progresses when they are associated with atrial tachyarrhythmia. Valvuloplasty or replacement concomitant with Maze procedure bring excellent results. In our 9 consecutive adult patients, all patients were associated with atrial tachyarrhythmia and full Maze was required in two patients, right-side Maze in 5. Gatzoulis et al. reported that sudden death in repaired TOF was frequently associated with moderate or severer PR and increased in 25 to 30 years after repair. Pulmonary valve replacement at the proper timing will rescue the patients at risk. If there found reentrant pathways around the scar tissue or the patch, they are cryoablated or partially resected. Among the patients with classical atrio-pulmonary connecting Fontan, extremely expanded RA will cause atrial tachyarrhythmia, deterioration of hemodynamics. In 2001, Mavroudis, et al. reported the impact of conversion to extracardiac TCPC combined with anti-arrhythmia surgery for the failing Fontan patients. But there remains still unignorable number of early death from 1.5% to 13.3% and late death from 9.8% to 13.2% after TCPC conversion even in the recent reports. Association of arrhythmia will increase with age because of chronic abnormal hemodynamics, multiple surgical interventions or natural course of the congenital heart disease itself. In surgical management of adult CHD, concomitant anti-arrhythmia procedures with repair of other cardiac lesions are vital to obtain satisfactory results.