**The Single Center Experience of Pacing Device Implantation in Patients with Complex Congenital Heart Disease**

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Aim: Transvenous cardiovascular implantable electronic devices (CIEDs) implantation in patients with complex congenital heart disease (CCHD) is challenging because of their complex anatomy. We report our experience of CIEDs implantation in CCHD patients. Methods: CCHD patients underwent the CIEDs implantation, were analyzed retrospectively. Results: We implanted CIEDs (pacemaker n=19, ICD n=5, CRT-D n=2) in consecutive 26 CCHD patients (mean 25y.o.) from 1994 to 2011. The underlying heart diseases were tricuspid atresia (n=2) and single RV (n=1) both after Fontan operation, single LV (n=1) underwent the septation, truncus arteriosus communis underwent Rastelli (n=1), transposition of great arteries (TGA)(n=9) and corrected TGA(n=12; SLL n=9, ID n=3). Twelve patients with TGA and corrected TGA underwent atrial switch(n=6) or double switch (n=6) operation. The pacing leads were successfully positioned with favorable sensing and pacing threshold in all patients, transvenously, without major complications. In 2 patients with cTGA, we successfully positioned the leads at the LV apex and in the coronary vein for the resynchronization of anatomical RV. The lead revision was required during the follow-up period, due to the lead dislodgement(n=2) and the lead fracture(n=2). Conclusion: Transvenous implantation of CIEDs was safely performed and feasible even in patients with CCHD and sometimes with atrioventricular discordance.

Keywords: congenital heart disease, pacemaker, implantable defibrillator