Usefulness of Micra leadless pacemaker for persistent atrial fibrillation patients with atrioventricular conduction failure after transcatheter aortic valve replacement

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Introduction: The aim of this study was to compare cardiac function of a group with implanted conventional single chamber lead pacemaker and a group with implanted Micra leadless pacemaker in persistent atrial fibrillation (AF) patients with atrioventricular conduction failure after transcatheter aortic valve replacement (TAVR).

Methods: We retrospectively evaluated the clinical features among 37 consecutive patients who had pacemaker implantation for atrioventricular conduction failure after TAVR from January 2016 through November 2018. Of the 37 cases, there were 10 cases of persistent AF with atrioventricular conduction failure after TAVR, 5 cases were implanted with conventional single chamber lead pacemakers, and the other 5 cases were undergoing Micra leadless pacemaker implantation. We compared cardiac function before and six months after each pacemaker implantation in these two groups.

Result: As shown by Table 1, there was no significant difference about before and after the measurement of left ventricular ejection fraction (EF) and right ventricular systolic pressure (RVSP) by echocardiogram between two groups.

Conclusion: Although follow-up in a short period of time, Micra leadless pacemaker may have no difference in their effects on cardiac function compared with conventional single chamber lead pacemakers in patients with persistent AF with atrioventricular conduction failure after TAVR. For elderly patients with persistent AF requiring a pacemaker with atrioventricular conduction failure after TAVR, the Micra leadless pacemaker may be useful.