

Outcome of contact force-guided radiofrequency catheter ablation or second generation cryoballoon ablation for paroxysmal atrial fibrillation: propensity score matched analysis

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Background: Little has been reported on the outcome of contact force (CF)-guided radiofrequency catheter ablation (RFCA) and second generation cryoballoon ablation (CBA).

Purpose: The purpose of this study was to compare the outcome of CF-guided RFCA and second generation CBA for paroxysmal atrial fibrillation (PAF).

Methods: We enrolled the consecutive 364 patients with PAF who underwent initial ablation between September 2014 and July 2018 in our hospital. We compared the late recurrence of atrial tachyarrhythmia more than three months after ablation between RFCA group and CBA group. All RFCA pro-

cedures were performed using CF-sensing catheter and all CBA procedures were performed using second generation CB.

Results: There were significant differences in background characteristics: chronic kidney disease, serum brain natriuretic peptide level, and left ventricular ejection fraction. After propensity score matched analysis (Table), atrial tachyarrhythmia free survival was significantly higher in CBA group than in RFCA group (Figure).

Conclusions: Second generation CBA showed a significantly lower late recurrence rate compared to CF-guided RFCA.

Propensity score matched analysis

	CF-guided RFCA (n=113)	Second Generation CBA (n=113)	p value
Age, years old	70 (65–74)	70 (60–76)	0.506
Male, n (%)	63 (56)	67 (59)	0.687
Hypertension, n (%)	63 (56)	59 (52)	0.689
Diabetes Mellitus, n (%)	15 (13)	12 (11)	0.682
Chronic Kidney Disease, n (%)	4 (3.5)	4 (3.5)	1.000
Serum Brain Natriuretic Peptide Level, pg/mL	51.6 (30.3–91.6)	53.9 (24.1–107.9)	0.980
Left Ventricular Ejection Fraction, %	72 (68–75)	71 (68–75)	0.856
Left Atrial Diameter, mm	42 (38–44)	42 (38–44)	0.916

