**Clinical implications of device-detected atrial fibrillation in cardiac resynchronization therapy**

Minjae Yoon1†, Jaewon Oh1†, Kyeong-Hyeon Chun2, Hee Tae Yu1, Chan Joo Lee1, Tae-Hoon Kim1, Hui-Nam Pak1, Moon-Hyoung Lee1, Boyoung Joung1, Seok-Min Kang1**\***

1Division of Cardiology, Severance Cardiovascular Hospital, Cardiovascular Research Institute, Yonsei University College of Medicine, Seoul, Republic of Korea

2Cardiology Division, Cardiovascular Center of National Health Insurance Corporation Ilsan Hospital, South Korea

**\*Corresponding Author:** Seok-Min Kang, MD, PhD

Professor, Division of Cardiology, Department of Internal Medicine

Yonsei University College of Medicine

50-1, Yonsei-Ro, Seodaemun-gu

Seoul, 03722, Republic of Korea

Tel: 82-2-2228-8450

Fax: 82-2-2227-7732

Email: smkang@yuhs.ac

**Supplementary Table S1. The baseline characteristics of the patients in each AF groups**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Device-detected AF  (N = 19) | Previous AF  (N = 54) | *P* value |
| **Clinical characteristics** |  |  |  |
| Age, year | 66 (59–69) | 71 (64–76) | 0.027 |
| Male | 11 (57.9) | 39 (72.2) | 0.385 |
| BMI, kg/m² | 24.3 (21.6–26.9) | 22.5 (21.6–25.5) | 0.172 |
| NYHA class II | 7 (36.8) | 14 (25.9) | 0.542 |
| SBP, mmHg | 107 ± 7 | 110 ± 15 | 0.623 |
| DBP, mmHg | 64 ± 5 | 68 ± 8 | 0.157 |
| Heart rate, bpm | 62 ± 13 | 71 ± 14 | 0.145 |
| LBBB | 13 (68.4) | 24 (46.2) | 0.163 |
| QRS duration, ms | 169 ± 23 | 163 ± 23 | 0.363 |
| QRS ≥150 ms | 13 (68.4) | 36 (70.6) | 0.999 |
| CRT-D | 18 (94.7) | 50 (92.6) | 0.833 |
| AVNA within 1 month after CRT implantation | 0 (0) | 21 (38.9) | - |
| Previous RFCA | 0 (0) | 5 (9.3) | - |
| Ischemic etiology | 4 (21.1) | 12 (22.2) | 0.999 |
| Hypertension | 9 (47.4) | 35 (64.8) | 0.287 |
| Diabetes mellitus | 8 (42.1) | 26 (48.1) | 0.852 |
| Chronic kidney disease | 1 (5.3) | 18 (33.3) | 0.016 |
| Stroke | 0 (0) | 13 (24.1) | - |
| **Medication** |  |  |  |
| Beta-blocker | 19 (100.0) | 49 (90.7) | 0.318 |
| ACEi/ARB | 18 (94.7) | 49 (90.7) | 0.999 |
| MRA | 15 (78.9) | 46 (85.2) | 0.497 |
| AAD | 3 (42.9) | 20 (37.0) | 0.240 |
| OAC | 7 (36.8) | 18 (33.3) | 0.999 |
| Digoxin | 3 (15.8) | 15 (27.8) | 0.368 |
| **Laboratory data** |  |  |  |
| eGFR, ml/min/1.73 m2 | 75.0 (70.5–90.0) | 62.5 (36.0–88.0) | 0.035 |
| NT-proBNP, pg/mL | 934 (602–2215) | 2429 (1260–6687) | 0.035 |
| Log NT-proBNP | 3.2 ± 0.5 | 3.4 ± 0.6 | 0.156 |
| Troponin-T, pg/mL | 23 (13–35) | 28 (16–47) | 0.161 |
| **Echocardiographic parameters** |  |  |  |
| LVEF, % | 26 ± 5 | 26 ± 7 | 0.124 |
| LAVI, ml/m2 | 48.0 (38.7–58.7) | 63 (48–87) | 0.007 |
| LVESV, ml | 163 (111–222) | 135 (95–156) | 0.121 |

Values are expressed as the mean ± standard deviation, median (interquartile range), or numbers (%).

AAD, antiarrhythmic drug; ACEi, angiotensin-converting enzyme inhibitor; AF, atrial fibrillation; ARB, angiotensin receptor blocker; AVNA, atrioventricular nodal ablation; BMI, body mass index; CRT, cardiac resynchronization therapy; CRT-D, cardiac resynchronization therapy-defibrillator; DBP, diastolic blood pressure; eGFR, estimated glomerular filtration rate; LAVI, left atrial volume index; LBBB, left bundle branch block; LVESV, left ventricular end-systolic volume; LVEF, left ventricular ejection fraction; MRA, mineralocorticoid receptor antagonist; NT-proBNP, N-terminal pro-brain natriuretic peptide; NYHA, New York Heart Association; OAC, oral anticoagulation; RFCA, radiofrequency catheter ablation; SBP, systolic blood pressure.

 **Supplementary Figure S1. The BiV pacing rate of each AF groups**

**(A)** BiV pacing percentage **(B)** Proportion of optimal BiV pacing (≥98%)

AF, atrial fibrillation; BiV, biventricular.