

471 Arrhythmia-free survival in early-persistent atrial fibrillation patients undergoing radiofrequency catheter ablation

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Aims: Despite advances in success rate of paroxysmal atrial fibrillation (PAF) ablation, outcomes of radiofrequency catheter ablation (RFCA) in patients with persistent AF are highly variable. Early persistent AF (EPsAF) is defined as AF that is sustained beyond 7 days but is less than 3 months in duration. Arrhythmia-free survival data after RFCA in this specific population are still limited. We sought to report the outcomes of RFCA in the subgroup of patients with EPsAF, compared to those with PAF and with 'late' persistent AF (LPsAF) lasting between 3 and 12 months.

Methods and results: Data from 1143 consecutive AF patients receiving their first RFCA were prospectively collected. Patients with EPsAF ($n=190$) were compared with PAF ($n=531$) and LPsAF ($n=422$) patients. All patients received pulmonary vein antrum isolation + posterior wall and sustained non-pulmonary vein (PV) trigger ablation. Non-sustained non-PV triggers were ablated based on operator discretion. Non-PV triggers were defined as sites of firing leading to sustained (>30 s) or non-sustained arrhythmias (<30 s, including premature atrial contractions ≥ 10 beats/min) with earliest activation outside the PVs. Mean age of the population was 64 ± 11 years. Female patients were more in PAF group (39%) compared to EPsAF (26%) and LPsAF (28%) ($P < 0.001$). There was no difference in other clinical characteristics among populations. Non-PV triggers were detected more in EPsAF [127 (66.8%)], and LPsAF [296 (70.1%)] patients compared to PAF [185 (34.8%)] ($P < 0.001$). One-year arrhythmia-free survival rate after a single procedure was 75.0% (398), 74.2% (141), and 64.5% (272) in PAF, EPsAF, and LPsAF, respectively. Success rate was significantly higher in PAF [HR: 0.67 (0.53, 0.84), $P = 0.001$] and EPsAF [HR: 0.67 (0.49, 0.93)], $P = 0.015$] compared to LPsAF.

Conclusions: In patients with EPsAF, RFCA may result in significantly better freedom from atrial arrhythmias, compared to LPsAF. In this cohort, ablation might be reasonable as first line approach to improve outcomes and prevent AF progression.