Abstract: **P1022**

**Two-year follow-up of new tailored approach for persistent and long persistent atrial fibrillation - Early Area Defragmentation (EADF)**

**Authors:**
M Ohe\(^1\), G Haraguchi\(^1\), J Kumanomido\(^1\), A Obuchi\(^1\), S Ito\(^1\), Y Fukumoto\(^1\), Kurume University School of Medicine - Kurume - Japan,

**Topic(s):**
Rhythm Control, Catheter Ablation

**Citation:**

**Background**
Pulmonary vein isolation (PVI) has been well established and widely performed for atrial fibrillation (AFib). However, it is still insufficient to maintain sinus rhythm (SR) in persistent and long persistent atrial fibrillation (Per-AFib) compared with paroxysmal atrial fibrillation (P-AFib). Therefore, more effective approaches should be developed.

**Purpose**
The purpose of this study was to develop a new tailored approach, Early area defragmentation (EADF), and prospectively investigate the efficacy and prognosis (2-years AFib free survival).

**Methods**
We acquired atrial potential more than 2,000 points from both atriums. We analyzed high frequency interval fragmented area map (HFI-MAP) by using interval confidence level (ICL) mapping mode of CARTO system. We performed PVI in all cases, and after confirmation of bidirectional block, we examined a new tailored approach, "EADF", which was able to identify the fragmented areas based on HFI-MAP and to ablate them in both atriums to achieve the disappearance of fragmented potentials (defragmentation). We also investigated the prognosis of EADF.

**Results**
We enrolled 77 patients in this study. After 2-years follow-up, 72.7% of them were able to maintain SR. Out of 77 patients, there were 21 recurrences of AFib (recurrence rate after 2-years; 27.3%). Eleven out of 21 recurrences, we were able to maintain SR by using antiarrhythmic drugs. During EADF session, we could terminate Per-AFib in 58.4% (45 of 77 patients) without cardioversion.

**Conclusion**
HFI-MAP could detect the high frequency fragmented areas. EADF based on HFI-MAP adding to PVI was very successful to maintain SR in patients with Per-AFib.
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