Implications of Time Interval from Atrial Fibrillation Ablation to Early Recurrence on Incidence of Late Recurrence

Kei Takayama, Kiyoshi Otomo, Hiroshi Taniguchi, Shigeki Kusa, Yuki Komatsu, Keiichi Hishikari, Takashi Uchiyama, Yoshito Iesaka
Tsuchiura Kyodo Hospital, Tsuchiura, Japan

**Background:** We have reported that "36 days" was an optimal length of blanking period after ablation procedures for persistent atrial fibrillation(AF). We tested the efficacy of the 36-day blanking period in reporting the post-ablation follow-up outcomes after the initial ablation procedure for persistent AF.

**Methods:** Consecutive 206 patients (age: 62±9 years) with persistent AF(AF duration: 7±8.5 months, LA diameter: 47±5 mm) underwent the initial ablation procedure for the anatomical bi-atrial linear ablation after the encircling PV isolation. An early and late recurrences were defined as a documented episode of AF or atrial tachycardia (AT) within and more than two months after the initial ablation procedure, respectively. The patients were classified into 3 groups: Group-1: no early recurrence (n=91), Group-2: early recurrences within 36-post-ablation days (PAD) (n=80) and Group-3: early recurrences after 36-PAD (n=35).

**Results:** The AF duration was longer and LA diameter was larger in Group-3 than in Groups-1 and 2 (P<0.05). Kaplan-Meier analysis revealed significant differences in the long-term freedom from late recurrences between Group-1 vs. Group-2, Group-1 vs. Group-3, and Group-2 vs. Group-3 (P<0.003 for each pairs). In multivariate analysis, both the AF duration and LA diameter were the independent predictors of an early recurrence after 36-PAD (P<0.05).

**Conclusions:** Patients without any early recurrences and those with early recurrences within 36-PAD showed significantly better follow-up outcomes than those with early recurrences after 36-PAD.

**Keywords:** atrial fibrillation, ablation, early recurrence