

# **Characteristics and outcome in patients receiving multiple (more than two) catheter ablation procedures for paroxysmal atrial fibrillation.**

謝敏雄

**Lo LW; Tai CT; Lin YJ; Chang SL**

摘要

## **Abstract**

**BACKGROUND:** The features of multiple catheter ablation procedures for paroxysmal atrial fibrillation (AF) are unknown. We aimed to investigate the electrophysiologic characteristics and the clinical outcomes in the patients with AF who received more than two ablation procedures. **METHODS:** The study consisted of 15 consecutive patients (age 48 +/- 14 years, 10 males) who had undergone three to five (3.3 +/- 0.6) catheter ablation procedures for recurrent paroxysmal AF. **RESULTS:** Ten patients had pulmonary vein (PV)-AF and one had AF originating from both PVs and the superior vena cava (SVC) in the first ablation procedure. All of them exhibited PV reconnection during the recurrent episodes. Four of the 15 patients had AF originating from non-PV foci (three from the SVC, one from the crista terminalis) in the first procedure, and two had AF recurrences due to recovered conduction from the SVC. In all patients with PV-AF recurrences, repeated PV isolation procedures could effectively eliminate the AF. The incidence of the need for additional LA linear ablation lesions was higher comparing between the first procedure and in the following ablation procedures (18% vs. 71%,  $P = 0.02$ ). During a follow-up of 1.7 +/- 1.1 years, 73% of the patients remained in sinus rhythm without any antiarrhythmic drugs after the final procedure. **CONCLUSIONS:** Recovered PV connection was the major cause of the AF recurrences despite undergoing multiple catheter ablation procedures. It is advisable to inspect all PVs during the AF recurrence. Repeated PV isolation plus left atrial linear ablations could effectively eliminate the AF with satisfactory outcomes.