# Double multielectrode mapping catheters facilitate radiofrequency catheter ablation of focal atrial fibrillation originating from pulmonary veins.

謝敏雄

Hsieh MH;Chen SA;Tai CT;Tsai CF;Prakash VS;Yu WC;Liu CC;Ding YA;Chang MS.

摘要

## Abstract

INTRODUCTION: Several reports have demonstrated that focal atrial fibrillation (AF) may arise from pulmonary veins (PVs). The purpose of this study was to investigate the safety and efficacy of using double multielectrode mapping catheters in ablation of focal AF. METHODS AND RESULTS: Forty-two patients (30 men, 12 women, age 65+/-14 years) with frequent attacks of paroxysmal AF were referred for catheter ablation. After atrial transseptal procedure, two long sheaths were put into the left atrium. Two decapolar catheters were put into the right superior PV (RSPV) and left superior PV (LSPV), or inferior PVs if necessary, guided by pulmonary venography. All the patients had spontaneous initiation of AF either during baseline (2 patients), after isoproterenol infusion (8 patients) or high-dose adenosine (2 patients), after short duration burst pacing under isoproterenol (14 patients), or after cardioversion of pacing-induced AF (16 patients). The trigger points of AF were from the LSPV (12 patients), RSPV (8 patients), and both superior PVs (19 patients). The trigger points from PVs (total 61 points) were 18 (30%) in the ostium of PVs and 43 inside the PVs (9 to 40 mm). After 6+/-3 applications of radiofrequency energy, 57 of 61 triggers were completely eliminated, and the other 4 triggers were partially eliminated. During a follow-up period of 8+/-2 months, 37 patients (88%) were free of symptomatic AF without any antiarrhythmic drugs. Twenty patients received a transesophageal echocardiogram, and 19 showed small atrial septal defects (2.8+/-1.2 mm) with trivial shunt. Fifteen defects closed spontaneously 1 month later. CONCLUSION: The technique using double multielectrode mapping catheters is a relatively safe and highlyeffective method for mapping and ablation of focal AF originating from PVs..