

# **Pulmonary vein morphology in patients with paroxysmal atrial fibrillation in ectopic beats originating from the pulmonary veins: implications for catheter ablation**

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摘要

## **Abstract**

**BACKGROUND:** Successful ablation of ectopic beats originating from the pulmonary veins (PV) could eliminate paroxysmal atrial fibrillation (PAF). However, information about the structure of the PV in patients with PAF that is initiated by PV ectopic beats has not been reported. **METHODS AND RESULTS:** We studied the morphology of the PVs and measured their diameters in 3 groups of patients. Group I included 52 patients (aged 66+/-14 years; 44 men) with focal atrial fibrillation (AF) from the PVs. Group II included 8 patients (aged 50+/-10 years; 3 men) with focal AF from the superior vena cava or cristal terminalis. Group III included 23 control patients (aged 55+/-16 years; 17 men). Of the control patients, 11 had AV node and 12 had AV reentrant tachycardia. After an atrial transseptal procedure, selective PV angiography using a biplane system with a right anterior oblique view of 30 degrees, a left anterior oblique view of 60 degrees, and a cranial angle of 20 degrees was performed. The ostial and proximal portions of the right and left superior PVs (RSPV and LSPV) were significantly dilated in group I patients compared with those in groups II and III. Furthermore, the ostia of the RSPV and LSPV were significantly dilated in group II compared with group III patients. However, the mean diameters of the inferior PVs were similar between the 3 groups. Comparisons of the individual PV diameters among the 3 subgroups of group I (which was divided according to where the ectopic focus was located) showed nonselective dilatation of the PV. **CONCLUSIONS:** Nonspecific dilatation of the ostia and proximal portion of superior PVs were found in patients with PAF initiated by ectopic beats from the superior PVs.