

Morphological Changes of the Left Atrial Appendage After Catheter Ablation of Atrial Fibrillation

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摘要

Abstract

INTRODUCTION: The left atrial appendage (LAA) has been proven to be the most important site of thrombus formation in patients with atrial fibrillation (AF). However, the information regarding the morphometric alteration of the LAA related to the outcome of AF ablation is still lacking. Thus, we evaluated the long-term changes of the LAA morphology in patients undergoing catheter ablation of AF using magnetic resonance angiography (MRA). **METHODS AND RESULTS:** Group 1 included 15 controls without any AF history. Group 2 included 40 patients with drug-refractory paroxysmal AF. They were divided into two subgroups: group 2a included 30 patients without AF recurrence after pulmonary vein (PV) ablation. Group 2b included 10 patients with late recurrence of AF. The LAA morphology before and after (20 +/- 11 months) ablation was evaluated by three-dimensional MRA. The group 2 patients had a larger baseline LAA size (including the LAA orifice, neck, and length) and less eccentric LAA orifice and neck. After the AF ablation, there was a significant reduction in the LAA size in the group 2a patients, and the morphology of the LAA neck became more eccentric during the follow-up period. In group 2b, the LAA size increased and no significant change in the eccentricity of the orifice and neck could be noted. **CONCLUSIONS:** The morphometric remodeling of the LAA in the AF patients could be reversed after a successful ablation of the AF. Progressive dilation of the LAA was noted in the patients with AF recurrence. These structural changes in the LAA may play a role in reducing the potential risk of cerebrovascular accidents