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PREDICTIVE VALUE OF LEFT ATRIAL SIZE FOR ATRIAL FIBRILLATION RECURRENCE AFTER SINGLE CIRCUMFERENTIAL PULMONARY VEIN ISOLATION: A SYSTEMATIC REVIEW AND META-ANALYSIS OF OBSERVATIONAL STUDIES

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Objectives LA enlargement is a well-known consequence of AF. However, whether dilated atrium predicts postablation AF recurrence is controversial. We undertook a systematic review and meta-analysis to analyse the association between left atrial (LA) diameter and atrial fibrillation (AF) recurrence after single circumferential pulmonary vein isolation (CPVI) and the potential mechanism.

Methods Electronic databases and bibliographies of retrieved studies were researched. Eligible studies were divided into three groups according to timing of follow-up and subanalyses were conducted based on AF type and blanking period of 3 months.

Results 27 studies with a total of 4486 individuals met the inclusion criteria. The summary WMD of LA diameter between patients with and without recurrence was 1.84 mm (95% CI 1.31 to 2.37; $p < 0.00001$). LA diameter was significantly associated with the risk of postablation recurrence in patients followed up over 3 months (WMD: 1.87 mm; 95% CI 1.28 to 2.46; $p < 0.00001$), as well as in patients with paroxysmal AF (WMD: 1.64 mm; 95% CI 1.06 to 2.23; $p < 0.00001$). However, in 3-month and non-paroxysmal subgroups, no significant differences in mean LA diameter were observed in patients with recurrence versus non-recurrence.

Conclusions Dilated LA significantly increases the risk of AF recurrence after single CPVI, especially in patients with paroxysmal AF followed up over 3 months.