TWO DIFFERENT ABLATION STRATEGIES IN PATIENTS WITH PAROXYSMAL ATRIAL FIBRILLATION: A PROSPECTIVE RANDOMIZED COMPARISON

ACC Poster Contributions
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Background: Ablation of atrial fibrillation (AF) remains a challenge. Pulmonary vein isolation (PVI) isolation plus linear lesions (LL) is superior to the PVI strategy in maintaining SR without antiarrhythmic drugs after procedures in paroxysmal AF. The aim of this study was to compare PVI isolation plus LL with PVI plus ablation of ganglionated plexi (GP) in patients with paroxysmal AF.

Methods: One hundred forty six consecutive patients with paroxysmal AF were randomly assigned to 2 different ablation schemes: PVI plus LL (n=72) and PVI plus GP (n=74). Primary end point was to assess the maintenance of sinus rhythm (SR) after procedures. Anti-arrhythmic drugs were discontinued within 2-4 weeks after ablation in both groups. PVI was successful in all targeted veins in both groups.

Results: PVI plus GP - after single procedure at the 12-month follow-up, 51 of 74 patients (68.9%) were in SR without AAD. AF recurrence was the reason of a redo procedure in 11 patients, atypical atrial flutter in 2 patients, and typical atrial flutter in 3 patients. In the 2 patients with atypical atrial flutter, a reentry circuit involving the right PVs was the mechanism. Among the remaining 11 patients with AF recurrence a recovery of veno-atrial conduction in at least 1 or more PVs was found in all the patients. With the addition of a second procedure, the overall success rate without AAD was 79.7% (59 of 74 patients). PVI plus LL - 38 of 72 patients (52.7%) were in SR without AAD (p=0.006). Repeat ablation was performed for recurrent AF in 21 patients, and for atypical atrial flutter in 9 patients. The mechanism of the atypical atrial flutter was a conduction gap in the lesion line of the left isthmus in 7 cases and a conduction gap in the roof line in 2 patient. Among the 21 patients with AF recurrence, a recovery of veno-atrial conduction in at least one or more PVs was found in all the patients. After second procedure, the overall success rate without AAD was 73.6% (53 of 72 patients; p=0.03).

Conclusions: PVI isolation plus GP is superior to the PVI plus LL strategy in maintaining SR without antiarrhythmic drugs after first and second procedures in paroxysmal AF.