Evaluation of the Efficacy of an Irrigated Catheter as Compared to Non-Irrigated for AF Ablation

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Background: Irrigated catheters deliver more adequate radiofrequency energy for creating transmural lesions than conventional catheters for AF ablation. Objective: The aim of this study was to evaluate the efficacy of irrigated catheters as compared to non-irrigated for AF ablation. Methods: A total of 309 consecutive symptomatic AF patients underwent circumferential pulmonary vein isolation (CPVI). They were divided into three groups in a retrospective review; those that a 3.5-mm-irrigated (n=103, Group1), 4-mm tip (n=100, Group2) or 8-mm-tip catheter was used (n=106, Group3). Results: The total radiofrequency energy was significantly greater in Groups 1 and 3 than in Group 2. A simultaneous ipsilateral both PVIs occurred significantly more in Group 1 than in Groups 2 or 3. After a successful PVIs, transient PV reconnections induced by an ATP injection in right PVIs were significantly more decreased in Group 1 than in Group 3. The cumulative freedom from recurrence was significantly more decreased in Groups 1 and 3 than in Group 2 during a follow-up of 11.4±3.1 months (p<0.05). Conclusions: Irrigated catheters produced more simultaneous ipsilateral PVIs, less acute transient PV reconnections using ATP and less AF recurrence than non-irrigated. The outcomes in acute and chronic phases were better with irrigated catheters. Keywords: atrial fibrillation, ablation, irrigation