Arrhythmias

DOES TERMINATION OF ATRIAL FIBRILLATION DURING ABLATION OF LONG STANDING PERSISTENT ATRIAL FIBRILLATION PREDICT THE OUTCOME AT FOLLOW-UP? RESULTS FROM A PROSPECTIVE RANDOMIZED STUDY

Oral Contributions
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Background: In patients with persistent and long standing persistent (LSP) atrial fibrillation (AF) in addition to pulmonary vein isolation (PVI), extensive substrate modification and Non PV triggers ablation is important to achieve long term success. Whether AF termination during ablation should be considered an ablation endpoint is controversial. After pulmonary vein and posterior wall (PW) isolation was completed in all patients, we investigated if AF termination with or without additional ablation could influence the ablation outcomes.

Methods: This prospective study included 302 consecutive patients with long standing persistent AF undergoing catheter ablation for atrial fibrillation and experiencing AF termination during ablation (defined as direct conversion to sinus rhythm). After AF termination, patients were randomized to verification of PVs and PW isolation plus consolidation of lesions at the site of termination (group 1), versus additional ablation of non PV trigger before and after challenge with isoproterenol (group 2). Follow-up was performed in all patients with Holter monitoring at 3-6 and 12 months and every 6 months thereafter.

Results: Group 1 consisted of 158 patients, (62±11 years, 76% male, LVEF 55±11, LA size 4.62±0.6cm) while Group 2 consisted of 144 patients (63±10 years, 74% male, LVEF 56±10, LA size 4.68±0.7cm). At 31±7 months, 48(31%) in group 1 and 96(67%) in group 2 were arrhythmia-free (log-rank p <.0001). Multivariable analysis showed that, termination of AF after completion of PV isolation was associated with significantly higher risk of recurrence [hazard ratio 1.76 (1.1-2.7) p=.008]. After adjusting for risk factors, group 1 had 2.5 fold risk to experience recurrences (hazard ratio 2.45 (1.75 to 3.46), p<.0001).

Conclusion: This study highlights the fact that AF termination during ablation does not eliminate the need for additional non-PV trigger ablation and does not predicts success at follow-up after a single procedure.