Clinical Predictor for Recurrence in Patients Undergoing Catheter Ablation of Atrioventricular Nodal Reentry Tachycardia

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Introduction: AH interval jumps or slow–fast atroventricular nodal echo beats may still be inducible in patients undergoing successful radiofrequency catheter ablation (RFCA) of atrioventricular nodal reentrant tachycardia (AVNRT). Presence of residual single echo beats with an echo zone longer than 30 msec may increase the risk of AVNRT recurrence. These findings are likely to be the result of conduction over a different slow AV nodal pathway than the one required to sustain AVNRT. We aimed to find additional post-RFCA electrophysiologic predictors for recurrence of AVNRT.

Methods: We retrospectively evaluated patients who underwent RFCA for AVNRT. We compared the post-RFCA electrophysiologic parameters between patients with recurrence and those without recurrence.

Result: A total of 1,000 consecutive AVNRT patients were successfully treated with RFCA. There were 15 patients who had AVNRT recurrence (1.5%; mean age, 43.5 ± 4.0 years; 7 (46.7%) were female) and 985 patients without recurrence (98.5%; mean age, 44.3 ± 0.6 years; 603 (61.2%) were female). In the recurred group, one had atypical pathway (fast-slow) and 14 had typical pathway (slow-fast). There was no significant difference in the presence of post-RFCA AH jump (71% in the recurred group vs. 71% in the non-recurred group, p=0.950) and the slow pathway window (54.8 ± 2.6 vs. 32.5 ± 10.3 msec, p=0.300) between the recurred and non-recurred group. The presence of echo beats (79% vs. 79%, p=0.99) and the echo window (40±2.2 vs. 30±20 msec; p=0.61) was also similar. None of the recurred patients had inducibility after redo ablation.

Conclusion: The overall recurrence rate was low (1.5%) in AVNRT patients undergoing RFCA. The presence of post-RFCA AH jumps and echo beats were similar in patients with and without recurrence. The slow pathway and echo window were also similar between the two groups. These findings suggest that post-RFCA AH jumps and echo beats are not reliable markers for predicting the recurrence in patients with AVNRT.