Can Complex Fractionated Atrial Electrogram Recur at the Same Site in Patients with Redo Catheter Ablation of Atrial Fibrillation?

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We questioned whether Complex Fractionated Atrial Electrogram (CFAE) can recur at the same site as in first ablation and relate to outcome of the patients underwent redo catheter ablation (re-CA) of atrial fibrillation (AF).

METHODS Out of 173 patients undergoing re-CA of AF, 7 patients (3.4%, 60±12 years) in whom automated CFAE (NavX map) guided ablation was performed at the first and re-CA were studied. RESULTS Mean time interval to re-CA was 21±11 months. In 4 of 7 patients (57.1%), no PV reconnection was observed at re-CA. In 6 of 7 patients, LA septum and anterior wall near the LA appendage (LAA) were the most common recurrence sites of CFAE. In 3 patients, AF terminated during ablation of recurrent CFAEs. The CFAE CL became longer (62.5±10.7ms vs. 88.9±30.7ms, P=0.06) and % of area of CFAE smaller (3.0±1.3% vs. 0.8±0.9%, P=0.003) than in those at the first ablation. There were no significant differences in LA diameter and LA volume (46.1±8.8mm vs 41.9±8.9mm, P=NS, 144±57.6 cm³ vs 121±47.2 cm³, P=NS) between two procedures. CONCLUSIONS In re-CA, areas of CFAE became smaller and CFAE CL longer than in those at first ablation. The CFAEs at the septum and peri-LAA were frequently recurred, in which AF terminated during re-CA in 43%.

Keywords: complex fractionated atrial electrogram, atrial fibrillation