efficacious approach to PVI.

CA-535-03

SAFETY AND EFFICACY OF VERY HIGH-POWER SHORT-DURATION ABLATION FOR PULMONARY VEIN ISOLATION

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Background: A very high-power short-duration (vHPSD) strategy of radiofrequency (RF) ablation aims to minimize conductive heating and increase resistive heating.

Objective: The aim of our study is to evaluate the feasibility, efficacy and safety of the vHPSD ablation of the for pulmonary vein (PV) isolation in patients presenting with paroxysmal or persistent atrial fibrillation (AF).

Methods: This prospective non-randomized study enrolled consecutive AF patients undergoing PV isolation. The vHPSD ablation was performed with the QDOT catheter, applying 90 W, for 4 s, with an irrigation of 8 ml/min. RF was delivered targeting interlesion distance ≤ 6 mm. The PVI was assessed at the end of the encirclement with the Pentaray catheter by entrance block and by remapping.

Results: Overall 163 patients (29 with persistent AF) were enrolled. The mean age was 61 ± 8 years, 60% had hypertension and 10% diabetes mellitus. PV isolation was obtained in all patients and at first-pass in 144 (88%) with a mean number of 83 ± 15 RF pulses. The mean procedural time was 85 ± 26 min, the mean fluoroscopy time was 9 ± 6 min and the mean RF time was 5.5 ± 1 min. In 5 patients (3%) access-related vascular complications occurred. The mean follow-up (fu) was 8 ± 3 months (fu > 6 months in 109 patients; fu > 12 months in 15 patients) and the freedom from AF recurrence was 97% in the overall population and in the paroxysmal and persistent subgroups as well (Figure).

Conclusion: The vHPSD ablation represents an effective and safe ablation strategy to achieve PV isolation in paroxysmal and persistent AF patients.