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Postervorträge - Resultate der Vorhofflimmerablation

P861 - Recovered pulmonary vein conduction in patients with atrial fibrillation recurrence after cryoballoon pulmonary vein isolation

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Introduction: Cryothermal-energy (CTE) applied via a balloon catheter (Arctic Front, Cryocath™) represents a novel technology which has demonstrated high success rate for acute pulmonary vein (PVI). However, the persistence of CTE induced lesions in patients with atrial fibrillation recurrence (AFR) is unknown.

Methods: A total of 27 pts with paroxysmal AF despite antiarrhythmic drugs underwent PVI using exclusively the "single-big-balloon" technique (28 mm balloon) between April 2006 and May 2007. Follow up included daily and symptom triggered tele ECG for 3 months (25/27 pts) and outpatient clinic visits (holter ECG) at 1, 3 and 6 months post ablation. If AFR occurred, a second ablation procedure was performed (3D left atrial (LA) reconstruction, CARTO, Biosense Webster) in conjunction with lasso guided PV mapping. Selective PV angiographies identified PV ostia which were tagged in the 3D LA map. Recovered conduction gaps were closed using radiofrequency current energy (3.5mm irrigated tip, flush: 17-25ml/min, energy: 30-40 W, temperature: 43°C, Navistar, Biosense Webster). Procedural endpoint was the elimination of all PV spikes.

Results: In 14/27 pts (52%) stable SR was documented during a mean follow up of 316 ± 122 days. In the remaining 13 pts (48%) AFR was observed. 8/13 pts (62%) underwent a second ablation procedure. In all 8 pts (100%) recovered PV conduction was observed as the major finding. All recovered conduction gaps were closed according to the 3D LA map and PV spike sequence displayed on the lasso. Subsequently, 6/8 pts (75%) remained in SR during a mean follow up of 196 ± 127 days, 1 out of 2 pts with AFR underwent a third ablation procedure, again PV reconduction was observed and gaps closed. Gaps appeared to be preferentially located at the postero-inferior LA. No complication occurred.

Conclusion: PV reconduction is the major finding in pts with AFR after cryoballoon pulmonary vein isolation. Gap closure is associated with improved success rate.