

## V648 - Cryoballoon applications after acute pulmonary vein isolation - the alster extra study

K. R. J. Chun<sup>1</sup>, I. Köster<sup>1</sup>, A. Metzner<sup>1</sup>, A. Fürnkranz<sup>1</sup>, B. Schmidt<sup>1</sup>, F. Ouyang<sup>1</sup>, K.-H. Kuck<sup>1</sup>

<sup>1</sup>III. Medizinische Abteilung, Fachabt. Kardiologie, Asklepios Klinik St. Georg, Hanseatisches Herzzentrum Hamburg, Hamburg;

**Background:** Cryoballoon ablation (Arctic Front, Cryocath™) represents a novel technology for pulmonary vein isolation (PVI) in patients with paroxysmal atrial fibrillation (PAF). To improve cryothermal lesions extra freeze(s) after successful acute PVI can be performed. However, there is no data investigating the long-term clinical effects of additional freezes.

**Methods:** Patients (pts) were prospectively assigned to group I (one extra application) or group II (two extra applications). Following double transseptal punctures, a lasso catheter (Biosense Webster) and the 28 mm cryoballoon (CB) inserted via a steerable sheath (12F, Flexcath, Cryocath) were positioned within the LA. Baseline PV angiograms and ostial lasso recordings were obtained from all PVs. After each freeze PV conduction was re-assessed with the lasso catheter and additional cryoballoon applications were performed for all PVs according to group assignment. Extensive follow up for AF recurrence utilizing an implantable recorder (IR) (Medtronic Reveal XT) or 7 day holter (7DH) ECGs at 1, 3, 6, 12 months was performed. Primary endpoint was defined as sinusrhythm without any AF/AT recurrence (>30 s duration). Secondary endpoints were procedural parameters and complications.

**Results:** A total of 47 pts with drug refractory PAF (36 males, LA 43 ± 6 mm, 8 pts structural heart disease) were assigned to group I: 25 pts or group II: 22 pts. Acute PVI was obtained in all pts (100%). The primary endpoint was obtained in 52% (group I, follow up: 14.5 ± 6.8 months, 15 pts IR, 10 pts 7DH) vs. 59% (group II, follow up: 12.9 ± 6.6, 8 pts IR, 14 pts 7DH). Procedure- and fluoroscopy-time for group I vs. group II was 189±60 min vs. 210±27 and 33±13 min vs. 34±11 min, respectively. There was no complication in group I but two complications in group II: 1 phrenic nerve lesion (>3 months) during the second extra freeze at the right superior PV, 1 intracranial bleeding with an INR of 3.8.

**Conclusions:** The addition of two cryoballoon extra freezes vs. one extra freeze after acute pulmonary vein isolation does not result in improved clinical success rate but prolongs the total procedure time.

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