

of catheter ablation (CA) of persistent atrial fibrillation (AF). QoL improvement in asymptomatic persistent AF patients has not been clarified. The Kansai Plus Atrial Fibrillation (KPAF) Registry is a multi-center registry enrolling more than 5,000 consecutive patients undergoing a first time radiofrequency catheter ablation of AF.

Purpose: To investigate the QoL change after persistent asymptomatic AF ablation and its associated factors.

Methods: A total of 297 patients in whom the QoL score was assessed before and one year after the ablation were enrolled from the KPAF registry (age 63±10 years, 85% male). The QoL was evaluated using the AF specific QoL evaluation method (AFQLQ), which scores the patient QoL within a range of 0–98 points.

Results: Overall, catheter ablation showed a significant increase in the AFQLQ score (81±14 vs. 90±10 points, $P<0.01$). AF recurrence was observed in 71 cases (24%) during a 1-year follow-up period. The QoL score significantly increased in the patients without AF recurrences compared to those with (11±15 vs. 5±16 point increase, $P=0.02$). In patients without AF recurrences, a multivariate analysis showed that a young age and high preprocedural heart rate (>90 bpm) were independent predictors of a QoL improvement defined as a >10% score increase.

Factors related with a QoL improvement

	Univariate			Multivariate		
	OR	95% CI	p value	OR	95% CI	p value
Age (per an increase of 10 years)	0.68	0.51–0.91	<0.01	0.67	0.50–0.90	<0.01
Male	0.95	0.46–1.95	0.88			
Hypertension	0.79	0.47–1.32	0.36			
Diabetes mellitus	1.15	0.52–2.54	0.72			
Heart failure	1.07	0.49–2.32	0.87			
Preprocedural heart rate >90 bpm	2.36	1.26–4.43	<0.01	2.39	1.26–4.53	<0.01
Ejection fraction <40%	1.49	0.35–6.40	0.59			
Body mass index, kg/m ²	1.03	0.96–1.11	0.36			

Factors with a $p<0.05$ in the univariate analysis were incorporated in the multivariate analysis. QoL, quality of life; OR, odds ratio; bpm, beat per minute.

Conclusions: Ablation of asymptomatic persistent AF improved the QoL, especially in patients with a young age and high heart rate.

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Assessment of adenosine triphosphate test and necessity of additional gap ablation after cryoballoon pulmonary vein isolation

Y. Matsumoto, A. Kobori, Y. Sasaki, Y. Furukawa. *Kobe City Medical Center General Hospital, Kobe, Japan*

Introduction: Adenosine triphosphate (ATP) test after initially completed pulmonary vein isolation (PVI) can unmask dormant conduction (DC) in patients after catheter ablation for atrial fibrillation (AF). However, the effectiveness of ATP-test on clinical outcomes and additional ablation for DC after cryoballoon PVI were controversial. This study aimed to reveal the influence of ATP-test on clinical outcomes after cryoballoon PVI.

Methods: 202 patients undergoing initial cryoballoon PVI for paroxysmal AF in our hospital between August 2015 and September 2017 were enrolled and observed prospectively. The durable PVI was confirmed by ATP test after completed cryoballoon PVI (Negative DC group). In positive DC patients, the transient appearance of DC was marked the location of the gap on CT and left without additional ablation (Leave DC group), while the persistent appearance of DC provoked by ATP-test were eliminated by additional radiofrequency ablation (Treat DC group). The primary endpoint was recurrences of atrial arrhythmias after 3 months blanking periods.

Results: A total of 202 patients were assessed after the initial cryoballoon PVIs; 185 patients in Negative DC group, 11 patients in Leave DC group and 6 patients in Treat DC group. The survival rates were comparable among groups (96.1%, 90.9%, 83.3%, respectively, $P=0.97$ log rank). The second session for the recurrence revealed the concordance PV gap site in 1 patients of Leave DC group, and a late reconnection of PV in 1 patients of Negative DC group.

Conclusion: ATP test and additional ablation would not influence on clinical outcomes of cryoballoon ablation for paroxysmal AF.

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Amiodarone plus ranolazine for conversion of post-cardiac surgery atrial fibrillation: enhanced effectiveness in low versus preserved ejection fraction patients

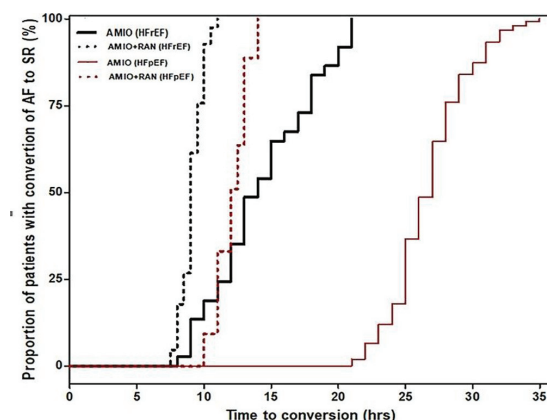
V. Simopoulos¹, A. Chevas¹, N. Desimonas¹, G. Kalafati¹, A. Hatziefthimiou², I. Skoularigis³, N. Tsilimngas¹, I. Aidonidis². ¹Univ. of Thessaly, Dept. of Thoracic & Cardiovascular Surgery, Univ. Hospital of Larissa, Larissa, Greece; ²Univ. of Thessaly, Dept. of Physiology, School of Medicine, Larissa, Greece; ³University General Hospital of Larissa, Cardiology, Larissa, Greece

Postoperative atrial fibrillation (POAF) is a common complication in patients (pts) undergoing cardiac bypass surgery. In principle, there is no doubt that this arrhythmia should be terminated for several reasons, especially in pts with compromised left ventricular function.

This summary compares the results of two separately evaluated single-center prospective studies executing during the last 4 years comprising patients with HFREF (<40%) or HFpEF (>45%) and POAF. Investigated was the antiarrhythmic

potency of amiodarone (A) as monotherapy vs. amiodarone+ranolazine (A+R) for converting POAF during a max. of 36-h period after initiation of treatment. Primary endpoints were conversion rate and time to conversion of arrhythmia in both groups. All pts were randomly assigned to receive either A or A+R within each group. In the HFREF group 511 pts (446 M/65 F, 65±9 years) were enrolled and in the HFpEF group 301 pts (257 M/44 F, 66±10 years). From the HFREF group, 255 pts were treated with i.v. A (loading dose 300 mg in 30 min + 1125 mg in 36 h) and 256 with A plus R (loading dose 500 mg p.o. + 375 mg after 6 h and then 375 mg twice daily); from the HFpEF group, 150 pts received only A while 151 the combined regimen at the same doses given for HFREF pts.

Pts treated only with A reverted to sinus rhythm (SR) later than those receiving A+R in both groups. In particular, A-only therapy was more effective in the HFREF group restoring SR earlier (8–21 h, mean 14.4±3.9 h) than in the HFpEF group (22–36 h, mean 26.8±2.8 h). Similarly, A+R treatment led also to earlier AF conversion in pts with HFREF vs. HFpEF (9.1±0.9 h vs. 11.3±0.6 h, respectively; mean±SD, $p<.001$, 1-way ANOVA, Bonferroni's Multiple Comparison Test). Left atrial diameter was significantly greater in HFREF vs. HFpEF pts (48.2±2.6 vs. 35.2±2.9 mm, $p<.0001$). No serious adverse drug effects were observed in any patient of the two groups. Post AF conversion heart rate, P-wave, QRS, QTc, and Tp-Te duration, albeit modestly changed after A+R vs. A alone in HFREF/HFpEF pts, remained within normal limits.



In conclusion, A-only treatment converted POAF earlier in HFREF pts compared to those with HFpEF. The combination of A+R resulted in shorter time to AF conversion than A monotherapy in both groups, while it was more effective in HFREF vs. HFpEF pts which were treated with A+R. These data are consistent with experimental findings demonstrating that R produces greater inhibition of INa in atrial cells of failing vs. normal hearts, possibly translating into more pronounced increase of atrial postrepolarization refractoriness in HFREF pts.

ATRIAL FIBRILLATION – STROKE PREVENTION

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Temporal relations between atrial fibrillation and ischemic stroke and their prognostic impact on mortality

S. Camen¹, F.M. Ojeda¹, T. Niiranen², F. Gianfagna³, S. Soderberg⁴, M.L. Lochen⁵, F. Kee⁶, S. Blankenberg¹, T. Joergensen⁷, T. Zeller¹, K. Kuulasmaa⁸, A. Linneberg⁷, V. Salomaa⁸, L. Iacoviello³, R. Schnabel¹. ¹University Heart Center Hamburg, Hamburg, Germany; ²Framingham Heart Study, Framingham, United States of America; ³University of Insubria, Varese, Italy; ⁴Umea University, Umea, Sweden; ⁵UiT The Arctic University of Norway, Tromsø, Norway; ⁶Queen's University of Belfast, Belfast, United Kingdom; ⁷Bispebjerg and Frederiksberg Hospital, Center for Clinical Research and Prevention, Copenhagen, Denmark; ⁸National Institute for Health and Welfare (THL), Helsinki, Finland. On behalf of BiomarCaRE investigators

Introduction: Atrial fibrillation (AF) and stroke are common diseases and AF is a well-established risk factor for stroke. The physiological mechanism of atrial dysfunction, disturbed hemodynamics and arterial thromboembolism links the pathologies. However, limited evidence is available on the temporal relationship between stroke and AF and the impact of subsequent disease onset on mortality in the community.

Methods and results: Across five prospective community cohorts (DanMONICA, FINRISK, Moli-Sani project, Northern Sweden MONICA study, The Tromsø Study) of the Biomarkers for Cardiovascular Risk Assessment in Europe (BiomarCaRE)-project we assessed baseline cardiovascular risk factors in 101164 individuals, median age 46.1 (25th, 75th percentile 35.8, 57.6) years, 48.4% men. We followed them for incident stroke and AF and determined the relation of subsequent disease diagnosis with overall mortality. Follow-up (FU) for stroke and AF was based upon linkage with national hospitalization registries or administrative registries for ambulatory visits to specialized hospitals.

Over a median FU of 16.1 years N=4556 individuals were diagnosed solely with AF, N=2269 had a stroke but no AF diagnosed, and N=898 developed both stroke and AF during FU. Participants who developed either AF or stroke as the index