

Conclusion: PVA supplemented by extensive defragmentation does not improve the overall success rate of long-lasting persistent AF. The efficacy of extensive defragmentation was diluted by the proarrhythmic effects.

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Association of renal dysfunction and stroke risk stratification scores with rhythm outcomes in patients after catheter ablation of atrial fibrillation

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Purpose: Renal dysfunction is an emerging risk factor for cardio- and cerebrovascular outcomes in patients with atrial fibrillation (AF). Its role for predicting rhythm outcome after AF catheter ablation is unknown and was consequently explored in this study, in relation to the stroke risk stratification scores (CHADS2, CHA2DS2-VASc and R2CHADS2, the latter including renal impairment (2 points) within the score).

Methods: Rhythm outcome was assessed using in-hospital and serial 7-day Holter ECG monitoring in 2069 patients undergoing radiofrequency AF catheter ablation. Baseline glomerular filtration rate (GFR) was estimated using the Cockcroft-Gault equation. Impaired renal function was defined as eGFR < 60 mL/min and was included in the recently suggested stroke risk stratification R2CHADS2 score. Early recurrence of AF (ERAF) was defined as any atrial arrhythmia > 30 seconds occurring within the first week, whereas late recurrence (LRAF) was defined as any atrial arrhythmia between 3 and 12 months after ablation.

Results: 35.9% patients suffered ERAF and 21.5% LRAF. On univariate analysis, renal dysfunction was a significant predictor for both ERAF (OR 1.5, 95% CI 1.05–2.09, $p < 0.05$) and LRAF (OR 1.9, 95% CI 1.1–3.4, $p < 0.05$). On multivariate analysis, after adjusting of gender, impaired renal function as predictor for ERAF did not reach significance ($p = 0.075$), but the CHADS2 (OR 1.1, 95% CI 1.04–1.3, $p < 0.05$), CHA2DS2-VASc (OR 1.1, 95% CI 0.9–1.9, $p < 0.05$) and R2CHADS2 (OR 1.15, 95% CI 1.1–1.2, $p < 0.001$) scores were independent predictors for ERAF. Similarly, CHADS2 (OR 1.2, 95% CI 1.1–1.5, $p < 0.05$), CHA2DS2-VASc (OR 1.2, 95% CI 1.02–1.3, $p < 0.05$) and R2CHADS2 (OR 1.3, 95% CI 1.1–1.4, $p < 0.001$) scores, but not eGFR < 60 mL/min ($p = 0.093$) were independent predictors for LRAF.

Conclusion: Renal dysfunction is one of the clinical predictors for early and late recurrences of AF. The CHADS2, CHA2DS2-VASc and R2CHADS2 scores had significant (and similar) predictive value for ERAF and LRAF after AF catheter ablation. The addition of renal impairment in R2CHADS2, did not differentiate this score from CHADS2 and CHA2DS2-VASc.

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Radiofrequency ablation as initial therapy in paroxysmal atrial fibrillation: results on health-related quality of life and symptom burden (The MANTRA-PAF trial)

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Purpose: The Medical ANtiarrhythmic Treatment or Radiofrequency Ablation in Paroxysmal Atrial Fibrillation (MANTRA-PAF) trial aimed to assess the long-term efficacy of an initial strategy of RFA with one of AAD as first-line treatment for patients with PAF. Primary end-point was cumulative AF-burden. HRQOL and symptom burden were two of the secondary end-points and are presented here. We aimed to access the effects of the respective treatment regime at 24 months.

Methods: Three questionnaires were used: SF-36, EQ-5D and ASTA.

SF-36 is a generic questionnaire containing eight scales: physical functioning (PF), role limitations physical (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role limitations emotional (RE) and mental

health (MH). EQ-5D is also a generic questionnaire and consists of two different types of measurement: the EQ-5D descriptive system and EQ VAS. The ASTA (Arrhythmia-Specific questionnaire in Tachycardia and Arrhythmia) questionnaire is a disease-specific questionnaire evaluating both HRQOL and the occurrence of and degree of symptoms during ongoing tachycardia. All comparisons made in an intention-to-treat manner.

Patients: From June 2005 to March 2009, 294 pts were enrolled in the MANTRA-PAF trial and randomized to either AAD (N=148) or to RFA (N=146). Mean age was 55±10 years and 206 (70%) were males. Baseline characteristics were well balanced. One third of the patients randomized to AAD crossed over to RFA due to treatment failure.

Results: All pts significantly improved in all of SF-36's scales at 24 months. Patients randomized to RFA improved more in four of the eight scales: PF, BP, GH and VT. EQ-5D showed similar results: Both randomization groups improved significantly with a significant favour for RFA.

In ASTA the three most commonly reported symptoms were breathlessness during activity, pronounced tiredness and worry/anxiety while chest pain was the least frequently reported symptom. For seven of the eight symptoms and for the ASTA symptom index there was a highly significant reduction over time, only chest pain showed no significant change. There were no significant differences between the two randomization groups.

Conclusion: For pts with PAF both AAD and RFA as first line treatment lead to a substantial improvement both in HRQOL and in symptom burden. Patients randomized to RFA improved more in physical scales (SF-36), in EQ-5D and in EQ-5D VAS and over all reported less frequent arrhythmia-related symptoms. Symptomatic relapse of atrial arrhythmia was associated with a marked reduction in HRQOL and increase in symptom burden.

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Pulmonary vein isolation in paroxysmal atrial fibrillation: comparison of three different techniques

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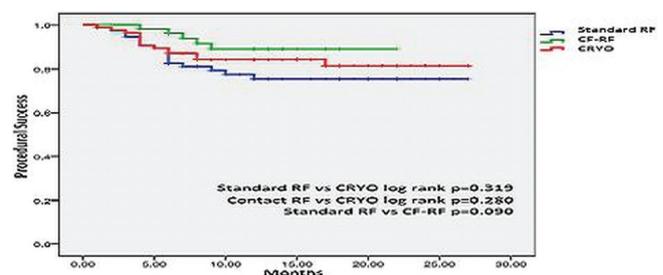
Introduction: Cryoablation (CRYO) has been proposed as a new alternative for the ablation of AF. However, concerning radiofrequency (RF) the development of contact force (CF-RF) seems to be a promising technique in order to improve the results. Comparative trials of these novel approaches with the standard radiofrequency (RF) technique are scarce.

Methods: Single-centre observational study comprising consecutive patients undergoing a first procedure of paroxysmal AF ablation. Relapse was defined as documentation of AF after an initial 3 months blanking period. Comparisons were performed according to the used treatment strategy: standard RF, CF-RF and CRYO.

Results: 217 patients were treated and followed during an average of 12.1±6.5 months.

	Standard RF (n=76)	CF-RF (n=54)	CRYO (n=87)	P
Age	59.5±10.0	61.0±10.0	62.1±11.2	0.295
♀	31.6%	23.8%	41.4%	0.120
CHA ₂ DS ₂ -VASc	1.4±1.3	1.4±1.2	1.9±1.6	0.051
Indexed LA Volume	37.9±12.4	40.3±11.3	41.0±11.8	0.262
Procedure duration	119.6±35.1	105.9±31.6	131.7±31.1	0.001*
Fluoroscopy time	31.4±11.8	20.7±10.6	28.2±8.5	0.001**
Relapse	22.4%	9.3%	16.1%	0.139

*CF-RF lower vs CRYO, **CF-RF lower vs standard RF.



Conclusions: These preliminary data suggest that CF-RF may be advantageous when compared with standard RF. Despite, the longer procedure duration CRYO may be a reasonable option due to non-inferior results compared with RF and CF-RF.