In Echocardiographic data, LA volume was no significantly change in both groups, but LA-EF of 6-month after cryoballoon ablation was significantly improved in comparison with RF ablation. LA-Sa of 1 month after RF ablation was significantly lower than before. LA-Sa after cryoballoon ablation was improved 6-month after.
Conclusions: The elevation of CK level after cryoballoon ablation might be reflected early damage of atrial muscle and the increasing of HANP secretion could be influenced recovery process of left atrium.

P6468
Echocardiographic predictors for early recurrence of atrial fibrillation undergoing catheter ablation

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Introduction: Echocardiographic evaluation is routinely performed prior to catheter ablation (CA) of atrial fibrillation (AF). AF ablation is still associated with significant recurrence rates. The aim of our study was to thoroughly identify any transthoracic (TTE) or transesophageal (TEE) echocardiographic parameter that could predict AF early recurrence (after 2 months of blanking period).
Methods: We included all consecutive patients submitted to our tertiary center from January 2017 to September 2017 for their first CA procedure who underwent both TTE and TEE evaluation before ablation. Multiple clinical and TTE/TEE variables were registered. Multivariate Cox regression analysis was performed to determine the predictive value of each clinical and echo parameter on the development of recurrences.
Results: A total of 79 patients (mean age 61,8 years, mean follow-up 6.1 months, 28% females, 48% persistent AF, 52% paroxysmal AF) were included. Twenty-seven patients (34%) developed AF recurrence within one year after CA. We divided our sample in four groups according to left ventricle ejection fraction (LVEF): >55%, 45–55%, 35–45% and <35%. As the EF value progressively decreased, the risk of recurrence increased (HR 1.85, CI 95% 1.19–2.90; p=0.007). Septal hypertrophy (HR 15.8, CI 95% 1.1–227.8; p=0.04) and the presence of echo-contrast (HR 2.9, CI 95% 1.0–8.4; p=0,049) were also associated with a higher risk of recurrence. A decreased TEE left atrial appendage wall-motion velocity, <40cm/s, was non-significantly (p=0.08) associated to recurrence.
Conclusions: In our sample, we found that the decreased LVEF, the septal hypertrophy and the presence of echo-contrast predicted early recurrences after CA (after blanking period). Complete echocardiography study in CA candidates may help in the selection patients to reduce the rate of recurrence.

P6469
Catheter ablation during sinus rhythm is associated with acute loss of left atrial contractile function in paroxysmal atrial fibrillation: a strain study

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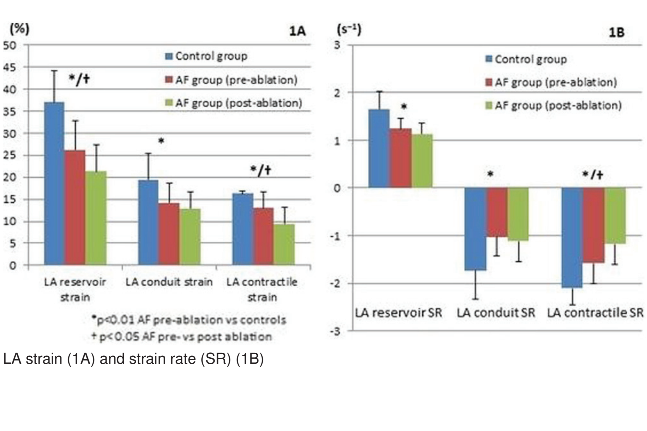
Background: Catheter ablation is the recommended treatment in patients with paroxysmal atrial fibrillation (AF). However, the data on acute effects of catheter ablation on left atrial (LA) contractile function are scarce. Therefore, the purpose of the study was twofold:
Purpose: Firstly, to describe acute effects of catheter ablation on LA contractile function in patients with paroxysmal AF and in sinus rhythm at the time of ablation. Secondly, to assess potential value of different indices of LA morphology and function.
Methods: We prospectively enrolled 50 consecutive patients (age: 62±21 y, 65% female) with symptomatic paroxysmal AF and preserved left ventricular ejection fraction (≥50%) undergoing the first catheter ablation, and 23 healthy controls. Patients with valvular AF or in AF at the time of ablation were excluded. All patients underwent comprehensive echocardiography at one day pre- and post- ablation. The LA reservoir, conduit and contractile strain and strain rate (SR) were assessed using 2D speckle tracking echocardiography as average of segmental values in apical views.
Results: Pre ablation, patients with paroxysmal AF had significantly lower magnitude of all three components of LA strain and SR compared with controls (all p<0.01). Catheter ablation was associated with significant decrease in magnitude of all components of LA strain and SR (all p<0.05), decrease of LA emptying fraction (54±10% vs 49±12%, p<0.01), and increase in LA stiffness index (0.32±0.12 vs 0.45±0.14, p<0.001), LA volume index (36±8% vs 38±8%, p<0.01) and E/e' ratio (8±2% vs 9±2%, p<0.01). Among all the indices of the LA size and function, LA contractile strain (Δ 27%) and SR (Δ 25%) showed the largest differences between the pre- and post- ablation values (p<0.01).
Conclusion: In paroxysmal AF, catheter ablation is associated with acute loss of LA contractile function in patients undergoing ablation during sinus rhythm. LA contractile strain and strain rate appear to be the most promising parameters to describe LA contractile function.
Data on the impact of LA strain and strain rate analysis on a short-term AF recurrence are being analyzed and will be made available by the time of the congress.



LA strain (1A) and strain rate (SR) (1B)

ECHOCARDIOGRAPHY OTHERS

P6470
Myocardial constructive work is a predictor of long-term outcomes in patients with heart failure undergoing cardiac resynchronization therapy

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Background: Myocardial constructive work (CW) assessed by pressure strain loops (PSLs) is an independent predictor of cardiac resynchronization therapy response (CRT+).
Purpose of the study: To assess the role of CW in the prediction of long-term outcome in patients undergoing CRT.
Methods: 2D- and speckle-tracking echocardiography were performed in 166 CRT candidates (mean age: 66±10 years, males: 69%) before CRT implantation and at 6-month follow-up. Left-ventricular (LV) end-systolic volume reduction >15% at 6-month follow-up defined CRT+ and occurred in 48 (29%) patients.

	Univariable analysis			Multivariable analysis		
Cardiac death	HR	95% CI	p-value	HR	95% CI	p-value
Age, per year	1.08	(1.01–1.15)	0.02	1.07	(1.00–1.15)	0.04
Ischaemic disease	3.99	(1.34–11.94)	0.01	2.33	(0.71–1.15)	0.16
NYHA >2	1.39	(0.46–4.24)	0.56			
LBBB	0.87	(0.27–2.77)	0.81			
LVEF, per %	0.99	(0.92–1.08)	0.89			
Septal flash	0.19	(0.06–0.62)	0.006	0.48	(0.12–1.95)	0.30
CW, per mmHg%	0.99	(0.99–1.00)	0.04	0.99	(0.99–1.00)	0.04
CRT-response	0.26	(0.09–0.78)	0.02	0.68	(0.18–2.57)	0.58
All-cause death						
Age, per year	1.05	(1.01–1.09)	0.01	1.06	(1.01–1.10)	0.01
Ischaemic disease	2.69	(1.27–5.66)	0.009	1.94	(0.86–4.39)	0.11
NYHA>2	1.86	(0.80–4.30)	0.15			
LBBB	0.85	(0.34–2.12)	0.72			
LVEF, per %	0.98	(0.93–1.04)	0.50			
Septal flash	0.39	(0.19–0.83)	0.02	0.87	(0.34–2.22)	0.77
CW, per mmHg%	0.99	(0.99–1.00)	0.03	0.99	(0.99–1.00)	0.03
CRT-response	0.36	(0.17–0.76)	0.007	0.24	(0.24–1.43)	0.59

Figure 1 Freedom from cardiac death in all patients

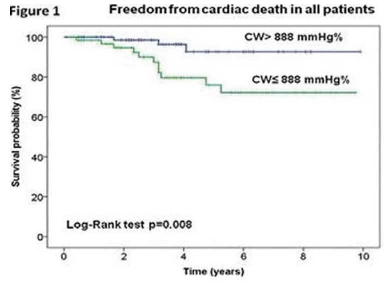

Figure 2 Freedom from all-cause death in all patients