Results After danhong injection treatment, the curative effect was better in treatment group than control group ($p<0.01$), BNP and CRP plasma levels both decreased significantly ($p<0.01$). In treatment group, BNP and CRP plasma levels more decreased significantly ($p<0.05$).
Conclusion Danhong injection can be the effective drug used in clinic for treating unstable angina.

e0622 CLINICAL EFFECT OF SHEXIANG BAOXING PILLS ON CORONARY HEART DIEASE IN PATIENTS WITH HEART FAILURE

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Objective To observe the curative effect of Shexiang Baoxing Pills on coronary heart diease in patients with heart failure (CHF).
Methods 116 patients on coronary heart disease with heart failure were divided randomly into two groups, one was regular treatment group treated with diuretic, ACE inhibitor, β-Blockers and digitoxin, and another was Shexiang Baoxing Pills treatment group treated with Shexiang Baoxing Pills on the basis of above regular treatment. All the patients were followed up for 6 months and observed the changes of the clinical symptoms, left ventricular ejection fraction (LVEF), left ventricular end diastolic diameter (Lived), 6 min walking distance and myocardial ischaemia paroxysm count of 24 h.
Results After Shexiang Baoxing Pills, each index of the Shexiang Baoxing Pills treatment group was obviously improved and the LVEF was higher than regular treatment group ($p<0.01$), LVEDd and myocardial ischaemia paroxysm count of 24 h was reductive than regular treatment group ($p<0.01$).
Conclusion Shexiang Baoxing Pills can be the effective drug used in clinic for treating chronic heart failure.

e0623 OPTIMAL LEFT VENTRICULAR LEAD LOCATION AND THE LONG-TERM OUTCOMES OF CARDIAC RESYNCHRONISATION THERAPY

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Introduction Lateral or posteriolateral coronary vein has been considered the optimal location of left ventricular (LV) lead placement for cardiac resynchronisation therapy (CRT). However, the long-term clinical outcomes of CRT based on LV lead location have not been sufficiently addressed.
Methods Seven hundred and eighteen CRT-P/CRT-D recipients from Jan 2002 to Dec 2008 were studied. At the CRT implant, the LV lead placement was prioritised as posterolateral/lateral (PL, 50%), anterior lateral (AL, 31%), anterior interventricular (AI, 12%) or middle cardiac veins (MC, 7%). NYHA class and echocardiography were assessed before and after CRT. Clinical outcomes of CRT were compared among 4 LV lead locations.
Results Patient baseline demographics, except the gender ($P=0.03$), were similar among four groups. After CRT, the improvement in NYHA class, LV ejection fraction (EF), and LV diastolic diameter were significantly improved comparably across four LV lead locations (table). The increase in LVEF by >5% were 46%, 47%, 41% and 42% in PL, AL, AI and MC groups ($p=0.87$).
Conclusion The present study suggests that LV lead positioned in the alternative coronary veins, other than posteriolateral or lateral location, achieve comparable benefit in improvement of HF symptoms, and LV function after CRT.

e0624 THE EFFECT OF CARDIAC RESYNCHRONISATION THERAPY ON NOVEL NEUROHORMONES IN HEART FAILURE

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Background Neurohormonal dysregulation contributes to heart failure (HF) progression. We sought to determine the effect of cardiac resynchronisation therapy (CRT) on the nerve growth factor (NGF), a biomarker that promotes the maturation, and survival of sympathetic nerve endings, and amino-terminal propeptide of type III procollagen (PIIINP), a marker of type III collagen synthesis.
Methods This prospective study enrolled 20 healthy age-matched controls and 45 consecutive patients (pts) who received CRT-D. NYHA class, distance of 6-min walk and echocardiography and plasma concentrations of NGF, PIIINP, b-type natriuretic peptide (BNP), norepinephrine (NE), epinephrine (EPI) and dopamine (DA) were measured before and 6 month after CRT. Response to CRT was defined as ≥15% reduction in left ventricular end-systolic volume index (LVESVI) at 6-month follow-up.
Results The baseline BNP (557±692 vs 47±35, $p<0.01$) and PIIINP (8.22±3.76 vs 5.36±1.47, $p<0.01$) were elevated in HF compared to controls, while NGF, NE, EPI and DA levels were not different. Twenty two of 45 pts (49%) responded to CRT. The responder group demonstrated significant decrease only in BNP level ($p=0.04$) at 6-month follow-up, parallelling with the clinical improvements (table 1). The baseline PIIINP was lower in CRT responders than non-responders ($p=0.04$), and it correlated with the reduction of

Table Comparison of clinic outcomes before and after CRT in different LV lead locations

	Lateral vein (N=359)		Anterolateral vein (N=226)		middle cardiac vein (N=49)		anterior interventricular vein (N=84)	
	Pre-CRT	Post-CRT	Pre-CRT	Post-CRT	Pre-CRT	Post-CRT	Pre-CRT	Post-CRT
NYHA	3.02±0.46	2.34±0.81*	2.92±0.53	2.34±0.89*	3.10±0.45	2.70±0.85*	2.98±0.52	2.43±0.86*
LVEF (%)	23.57±7.28	30.82±11.67*	24.19±7.96	30.44±12.06*	24.97±7.62	30.72±11.43*	22.45±7.25	28.40±11.73*
LVEDD (mm)	65.71±9.12	63.00±9.73*	65.79±8.87	63.88±9.88*	65.39±9.32	62.61±10.25*	68.48±8.92	64.86±9.67*
LVESD (mm)	57.91±9.89	52.83±11.68*	56.69±10.23	53.03±12.01*	56.18±11.56	52.24±13.11*	59.09±10.04	55.32±13.30
RVD (mm)	0.90±0.86	0.82±0.85	0.85±0.92	0.82±0.85	0.86±0.83	1.01±0.84	0.56±0.77	0.78±0.91
RV dysfunction	1.05±0.92	0.88±0.92*	1.03±0.93	0.93±0.91	1.06±0.97	1.06±0.90	0.74±0.86	0.79±0.96
MR (m/s)	1.54±0.78	1.30±0.75*	1.57±0.83	1.35±0.75*	1.53±0.71	1.15±0.70*	1.36±0.69	1.19±0.68

*$P<0.05$ compared to pre-CRT.

LVESVI (p=0.01, r=−0.50) after CRT. The further multivariate analysis showed only the plasma PIIINP level among clinic characters and all the biomarkers can predict the improvement of LVESV index (OR=8.33, *P*=0.01).

Conclusion The low PIIINP level, which is consistent with possible less cardiac fibrosis and a more plastic ventricle at baseline, is associated with CRT responsiveness. Contrary to previous reports, the NGF levels were not reduced during HF and that there was no NGF rebound in CRT responders.

e0625 LEFT ATRIAL PRESSURE IS A DETERMINANT OF RECURRENCE IN ATRIAL FIBRILLATION AFTER CATHETER ABLATION

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Introduction Pulmonary vein isolation is an effective therapy for curing symptomatic atrial fibrillation (AF). While it is known the severity of left atrial (LA) enlargement affect the success of AF ablation, little is known the impact of intracardiac pressure on the ablation outcome.

Methods This prospective study consisted of 63 patients (mean age 57±9 years, 73% male) who underwent catheter-based pulmonary vein isolation for drug refractor symptomatic AF (48% paroxysmal, 52% persistent). All patients underwent simultaneous echocardiography and haemodynamic measurements including left ventricular end systolic pressure (LVEDP), mean left atrial pressure (LAP) and dP/dt_{max} using Millar catheter at the time of procedure during AF. Left atrial volume (LAV) was measure by biplane area length method. Recurrence of AF was defined as episodes of AF more than 5 min documented in 24h ambulatory ECG or event monitor.

Results After a mean follow-up duration of 16±7 months, AF elimination off anti-arrhythmic drugs was achieved in 70 % (44/63) of patients. Among the echographic and haemodynamic measurements, the baseline LAV and mean LAP were 57.62±25.39 ml and 12.19±4.57 mm Hg in AF free patients compared to 81.20±40.88 ml (p=0.02) and 16.46±4.14 mm Hg (p=0.01) in AF recurrence groups. Univariate and multivariate analysis showed LAP was the only independent predictor of the recurrence with an adjusted odd ratio of 1.27 (95% CI 1.04 to 1.54, p=0.03, table).

Conclusion LAP is a determinant of AF recurrence after AF ablation. Therapies towards reduction of LA filling pressure, especially in patients with elevated LAP, may improve the outcome of ablation.

Table Baseline clinical characters in the recurrence group and non-recurrence group

	Non-recurrence (N=44)	recurrence (N=19)	Univariate		Multivariate	
			P	95% CI	*P*	95% CI
Age (ys)	57.39±9.92	59.26±10.47	0.49	0.97, 1.08	—	—
AF type, persistent AF no. (%)	23 (53%)	10 (50%)	0.97	0.34, 2.98	—	—
AF duration (ys)	5.84±5.43	8.08±7.66	0.20	0.99, 1.05	—	—
LA volume (mL)	57.62±25.39	81.20±40.88	0.02	1.01, 1.05	0.30	0.99, 1.05
LVEDP (mm Hg)	10.25±14.54	11.25±5.75	0.81	0.96, 1.06	—	—
dP/dt max (mm Hg/s)	1294.02± 337.13	1211.77± 225.36	0.47	0.99, 1.02	—	—
Mean LAP_{mean} (mm Hg)	12.19±4.57	16.46±4.14	0.01	1.06, 1.50	0.02	1.04, 1.54

Pulmonary vein isolation is an effective therapy for curing symptomatic atrial fibrillation (AF) but the success rate ranged wide. This study aimed to investigate the effect of LAP on AF recurrence.

e0626 THE EFFECTS OF RECOMBINANT HUMAN B-TYPE NATRIURETIC PEPTID ON CORONARY CIRCULATION AND RENAL HAEMODYNAMICS IN YORK PIGS MODEL OF ACUTE MYOCARDIAL INFARCTION WITH HEART FAILURE

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Objective To evaluate the impact of intravenous administration of rhBNP on coronary and renal artery haemodynamics in York pigs model of AMI-ADHF.

Methods Fourteen York pigs were included in this study. After the AMI-ADHF models were established, pigs were randomised into saline group and rhBNP group. Coronary pressure (P_c), the average peak velocity (APV), coronary vascular resistance (CR), coronary flow reserve (CFR) and coronary diameter were recorded simultaneously at baseline, instant after the model established, 60 min after continuous infusion of 0.01 $\mu g \cdot kg^{-1} \cdot min^{-1}$ rhBNP and the time point of LVEDP<12 mm Hg. The blood flow of the coronary were measured at rest and maximal hyperaemia. Renal angiography was performed by 4F catheter and quantitative measurement of diameter was recorded by the computer assisting system. The average peak rate of renal artery (APV_{ra}) was recorded, determination of quantitative angiography of renal artery diameter, renal vascular resistance. LVEDP and LVEF was measured.

Results 1. Coronary artery diameter increased after rhBNP administration. APV and CBF were significantly increased and CR decreased after rhBNP administration. CFR was significant rebound after continuous infusion of 0.01 $\mu g \cdot kg^{-1} \cdot min^{-1}$ rhBNP for 30min. APV and CBF significantly increased and CR significantly decreased at the stage of infusion 0.010 $\mu g\ kg^{-1}\ min^{-1}$ rhBNP in rhBNP Group. 2. Renal artery pressure was significantly lower after rhBNP administration. RhBNP exerts renal vasodilator effects in a dose related relationship. RBF increased gradually after administration of rhBNP and was significantly higher than control group. RVR decreased after administration of rhBNP. LVEF was lower than baseline after the models established and tended to increase after administration of rhBNP.

Conclusion It could increase blood flow of injury coronary artery, improve CFR and improve the coronary and renal haemodynamics after intravenous administration of rhBNP in pigs with AMI-ADHF.

e0627 THE PERIOPERATION EFFECT OF RECOMBINANT HUMAN B-TYPE NATRIURETIC PEPTIDE FOR HEART FAILURE PATIENTS WITH PRIMARY PERCUTANEOUS CORONARY INTERVENTION

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Objective To study the efficacy and safety of recombinant human B-type natriuretic peptide (rhBNP) in AMI-ADHF patients undergoing PCI, especially changes in renal function and the impact of short-term outcome during BNP treatment.

Methods 87 consecutive patients with AMI-ADHF entrolled in the study. All patients were randomly assigned to the rhBNP group and control group. rhBNP was given at 1.5 $\mu g\ kg^{-1}$ intravenously and then infused intravenously (0.0075—0.030 $\mu g\ kg^{-1}\ min^{-1}$). 0.9% Saline was used intravenously in control group as control. Clinical symptoms and killip grade were recorded. Plasma BNP levels were measured before and after stopping the drug 6h, 14d, 30d. LVEDD