Methods 32 patients with SSS or AVB associated chronic heart dysfunction were divided two groups RA-URIS pacing group (13 cases) and RA-RVA pacing group (19 cases). The parameters including left ventricular mass index (LVMi), left ventricular ejection fraction (LVEF) and 6 min walk test (6-MWT) were compared between two groups in pre-pacing and in follow up 24 months after pacing.

Results There were no difference on LVEF, LVMi and 6-MWT between two groups before pacemaker implanted. But after 24 months for pacing therapy in RA-URIS group, there was significant increase in LVEF (48.3±10.1 vs 40.7±8.4, p<0.05), 6MWT (586±69 vs 530±78, p<0.05) and decrease in LVMi (102.5±16.3 vs 120.1±18.5, p<0.05) Meanwhile, LVEF, 6-MWT (48.3±10.1 vs 48.7±5.5, 356±69 vs 329±91, p<0.05) were increased and LVMi (102.5±16.3 vs 113.6±17.4, p<0.05) were decreased significantly in RA-URIS group compared with those of RA-RVA group in 24 months follow up.

Conclusion The results showed that RA-URIS pacing may reverse left ventricular remodelling in patients with chronic heart dysfunction as well as improving life quality.

e0650 THE EFFECTS OF BIVENTRICULAR SYNCHRONOUS PACING ON CBF, MVO2 AND CWE IN DOGS

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Objective To compare the effects of biventricular synchronous pacing with different pacing site on coronary Blood flow (CBF), myocardial oxygen consumption (MVO2) and cardiac work efficiency (CWE).

Methods RA-cHisB and RA-RVA sequential pacing, RVA-LVPL and cHisB-LVPL pacing, RA-RVA-LVPL and RA-cHisB-LVPL pacing were randomly performed in 14 dogs with general-anaesthetised, opened chest and artificial-ventilation. SNR was as self-control. Every pacing mode was to capture SNR for 20 min with a recovery of physiologic parameters for 10 min, and then shift another pacing mode in turn. CBF and CO were measured by a electromagnetic flowmeter. Blood sample were respectively collected from the catheters in left ventricle and coronary sinus for getting the arterial O2 saturation (SaO2), coronary sinus O2 saturation (ScsO2) and Hbg.

Results No significant difference in CBF among the RA-cHisB-LVPL, RA-RVA-LVPL and RA-cHisB pacing were found. CBF in RA-RVA pacing was decreased than that in RA-cHisB-LVPL, RA-RVA-LVPL and RA-cHisB pacing. MVO2 among the all groups had no significant changes compared with each other. CO of RA-cHisB, RVA-LVPL and cHisB-LVPL pacing were increased as compared with that in RA-RVA pacing (p<0.01). CO in cHisB-LVPL pacing was increased by 6.7% than that in RVA-LVPL pacing. CO in RA-cHisB pacing was increased by 8.7% than that in RA-RVA pacing. CO in RA-RVA-LVPL pacing was increased as compared with that in RA-cHisB and cHisB-LVPL pacing, respectively. CO in RA-RVA-LVPL pacing was increased than that in RA-RVA-LVPL pacing. The changes of CWE were similar to that of CO among all pacing groups. CBF in RA-cHisB-LVPL pacing was significantly enhanced as compared with that in RA-cHisB and RA-RVA-LVPL pacing. Conclusions RA-cHisB dual chamber, cHisB-LVPL biventricular and RA-cHisB-LVPLV triple-chamber pacing might significantly increase CBF and CWE without the increment of MVO2.

Conclusion The biventricular synchronous pacing have the beneficial effects on maintaining the balance between myocardical oxygen supply and consumption and increasing CWE by enhancing the cardiac ejection performance.

e0651 EVALUATION ON ACUTE HAEMODYNAMIC EFFECTS OF INTRAVENOUS RHBNP IN ACUTE MYOCARDIAL INFARCTION PATIENTS WITH HEART FAILURE BY CONTINUOUS SWAN-GANZ CATHETER MONITORING

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Objectives To compared and evaluated the acute haemodynamic effects and safety of intravenous rhBNP versus nitroglycerin (NIT) in AMI patients with ADHF by Swan-Ganz catheter (6f, ARROW, Inc USA) monitoring through a prospectively designed study.

Methods 42 consecutive AMI patients with ADHF were randomised into rhBNP group (n=21, 1.5 µg·kg⁻¹ bolus intravenous injection followed by 0.0075 µg·kg⁻¹·min⁻¹ for the first 3 h and 0.015–0.03 µg·kg⁻¹·min⁻¹ infusion for following 21 h) and NIT group (n=21, 10 to 100 µg·min⁻¹ intravenous infusion for 24 h).

The invasive haemodynamic parameters were measured at the baseline, during 24 h of drug infusion and 6 h of post-infusion by Swan-Ganz catheter monitoring via subclavian access while total urine output during 30 h and relative serum chemistries were measured. MACE was followed up 1 week.

Results As early as 30 min after the initiation of rhBNP, PCWP was reduced by 48.9% contrasted to baseline and cardiac index (CI) was increased by 27.1% at 1 h of rhBNP infusion respectively, (p<0.05); these significant changes in PCWP and CI continued throughout 24 h of rhBNP infusion and 6 h of discontinuing the infusion (p<0.05). Although PCWP reduced significantly at 2 h of NIT infusion (p<0.05) and CI elevated significantly at 3 h of infusion. The total urine output for 30 h of this study in rhBNP group tended to be more than that in NIT group (p>0.05), while serum potassium concentration in rhBNP group was significantly increased relative to baseline value (5.4±0.5 vs 4.0±0.4 mmol·L⁻¹, p<0.05). There was no symptomatic hypotension or other adverse events appeared to be associated with rhBNP administration under this study.

Conclusions Intravenous injection of rhBNP results in more rapid, strong and prolong haemodynamic improvement than that of NIT in AMI patients with ADHF as well as it is also feasible and safe in clinic as a selective agent for AMI patients with ADHF.

e0652 THE LEVEL CHANGES OF IL-8 AND THE RELATIONSHIP TO THE LEFT VENTRICULAR ANEURYSM FORMATION AND CARDIAC PERFORMANCE IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

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Objective To investigate the changes in interleukin-8 (IL-8) and the relationship with the left ventricular aneurysm (LVA) and cardiac function in acute myocardial infarction (AMI) patients using left ventriculography (LVG).

Methods A total of 106 patients with primary anterior AMI accompanied LVA diagnosed by LVG were submitted to LVG after onset of AMI symptom and divided into LVA group and non-LVA group. Plasma IL-8 was measured. At the immediately after PCI and 6th month after AMI, the parameters of left ventricular end diastolic volume index (LVEDVI), left ventricular end systolic volume index (LVESVI), left ventricular ejection fraction (LVEF), wall motion score (WMS) and left ventricular end diastolic pressure (LVEDP) were measured by LVG. The main adverse cardiac events were recorded in 24th week after PCI.
Results There was no difference between the two groups in clinical characteristic, while the interval time of onset to reperfusion in LVA group was longer and the incidence of Killip 3 grade was higher than those in non-LVA group (p<0.05, respectively). The peak value of plasma IL-8 in LVA was significantly higher and the peak time of plasma cTnI was much earlier than those in the non-LVA group (p<0.05, respectively). The peak values of plasma IL-8 in LVA group with LVEDP=18 mm Hg were significant higher than that in non-LVA with LVEDP. The peak value of plasma IL-8 in LVA group with LVEDP<18 mm Hg were significant higher than that in non-LVA with LVEDP (p<0.05). At 6th month post-AMI, the value of LVEF, LVESVI, LVEDVI, WMS and LVEDP in non-LVA group were much better than those in LVA group. The values of LVEF, LVESVI, LVEDVI, WMS and LVEDP in non-LVA group at 6th month post-AMI were significantly improved as compared with those at the first time after PCI but the values of LVEDVI, WMS, LVEDP were improved in the LVA group. Within the 6th month follow-up, the incidences of angina post-AMI, heart failure of NYHA=3 grade and mortality in LVA group were significantly higher than those in the non-LVA group (p<0.05, respectively).

Conclusions The value of plasma IL-8 is significantly increased and correlated closely with left ventricular remodelling status and haemodynamic change in patients with LVA after AMI. It is indicated that the over activity of immune inflammatory medium IL-8 involves in the process of LVA formation and has an important clinical significance in early diagnosis and appreciation of LVA post-AMI.

Conclusions The value of plasma BNP in the AMI patients with LVA was higher than that with non-LVA, and significantly correlated with left ventricular remodelling status and homodynamic change. It is indicated that the over secretion of BNP is involved in the left ventricular remodelling and the process of LVA formation.

Objective Anisodamine is a M-cholinergic receptor inhibitor that plays improvement effectiveness on the microcirculative perfusion. Our previous study had ever shown reversing effect on no-reflow phenomenon (NRP) in the miniswine models with AMI. The purpose of this study was continually to explore the effect of preventive intracoronary administration of anisodamine on myocardial microcirculation in York swines models with AMI by TIMI frame count, TIMI myocardial perfusion grade and haemodynamic parameters.

Methods 18 York swines (25 ~ 35 kg, 3 ~ 4 months old) were divided into saline group (n=9) and Anisodamine group (n=9). Immediately after 2 ml saline and 2 mg anisodamine were injected into LAD in the two groups respectively, PMBS were injected into the coronary artery by three times with 5 min interval, then incidence of NRP was recognised by TIMI frame count and TIMI myocardial perfusion grade. Tnl and CK-MB were measured before PMBS injection and at 5, 60, 120, 180 min after PMBS injection. MPP and PCWP were measured by Swan-Ganz catheter. ECG was recorded before and immediately after PMBS injection and STZ were calculated. The changes of FR, QRS and QT duration were also compared.

Results 16 of 18 York swines survived in the whole procedure. NRP was found in all of the eight swines in saline group while four of eight swines in anisodamine group. MPP (mean perfusion pressure) was slightly increased by 4.76% only in anisodamine group (p>0.05), while MPP were significant decreased by 25.23%, 25.63%, 19.66 % respectively, 3 min and 1 h after NRP in saline group (118.5±12.3 vs 88.6±12.5, 118.5±16.2 vs 90.5±14.3, 118.5±16.2 vs 95.2±16.3 mm Hg, p<0.05, respectively, and PCWP, values of STZ and myocardial Infarct size in anisodamine group were much lower than that in saline group significantly (p<0.05).

Conclusion Preventive intracoronary administration of anisodamine could improve AMI survival rate with NFR by maintaining effective myocardial microcirculation status and raising coronary perfusion pressure as well decreasing the size of myocardial infarction.