the patients fasting periphery venous flood acquired on the second morning, fasting plasma glucose (FPG), triglyceride (TG), low density lipoprotein-cholesterol (LDL-C), high density lipoprotein-cholesterol (HDL-C), creatinine (CRE) are tested by auto-biochemistry instrument, enzyme linked immunosorbent assay adopted. 3. Two-dimensional and Doppler echocardiography was performed using a Vivid 7 Dimension echo machine. Left ventricle end-diastolic diameter (LVEDD) and left atrial (LA) dimensions were standard M-mode measurements. Left ventricle ejection fraction (LVEF) was calculated using the modified Simpson’s rule. 4. After centrifugation, 0.5 ml clear supernatant liquid of fasting periphery venous flood deserved in −80°C less than 5 months. AFN concentration was measured by radio-immunity method. 5. Record each general state, including BMI, medicine taking, whether with or without hypertension, corona heart disease and so on. All data are expressed as mean±SD. All analyses were performed using SPSS 17.0.

Results Adiponectin concentration in persistent AF was significantly higher than in control group and paroxysmal group. Covariance analysis revealed that plasma adiponectin was also significantly associated with the presence of arterial fibrillation (p<0.05). Univariate analysis TG has influence on APN. Multiple linear regression show APN correlated negatively with TG, and APN in persistent AE group is higher than paroxymal AF group and controls.

Conclusion High plasma adiponectin levels are associated with the presence of persistent and permanent AE. Adiponectin concentration was correlated negatively with TG.

Conclusions HCV infected individuals had higher NT-proBNP levels than age matched controls, which show a possible cardiac functional evidence for a pathogenic link between HCV and CVD. The finding is consistent with an increased incidence of HCV or HCV antibody described in some CVD patients.

**e0678** PROTEIN AND MRNA EXPRESSION OF CX40 IN CRISTA TERMINALIS OF PATIENTS SUFFERED FROM RHEUMATIC HEART DISEASE WITH CHRONIC ATRIAL FIBRILLATION

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Objective To investigate the protein expression and mRNA expression of CX40 in crista terminalis of patients suffered from rheumatic heart disease with chronic atrial fibrillation. And evaluate the function of the remodelling of CX40 in development and maintenance of atrial fibrillation in rheumatic heart disease.

Methods A small piece of myocardial specimen was acquired from crista terminalis during the operation in 20 patients who need operation therapy for rheumatic mitral valve disease and six patients undergoing other cardiac surgery served as control group. Western blot was used to detect expression of CX40. CX40 mRNA expression was detected by real-time fluorescence quantitative PCR method.

Results Compared with sinus rhythm, CX40 expression was decreased in chronic atrial fibrillation. But, the difference of CX40 mRNA expression among the three groups had no statistical significance.

Conclusion The remodelling of CX40 plays an important role in the development and maintenance of atrial fibrillation in rheumatic heart disease. And the mechanism of the remodelling of CX40 remains in the level after expression of CX40 gene.

**e0679** DEVELOPMENT OF A RAPID QUANTITATIVE DETECTION OF NT-PROBNP BASED ON SUPERPARAMAGNETIC NANOPARTICLES AS LABELS IN THE LATERAL FLOW IMMUNOASSAY

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Objective To establish a lateral flow immunoassay (LFIA) system for rapid, economic and quantitative detection of N terminal pro brain natriuretic peptide (NT-proBNP).

Method In this study, superparamagnetic nanoparticles (MNFs) were used as labels, the immuno-nanoparticles were prepared by coupling monoclonal antibody specific to NT-proBNP onto MNFs, then the immunonanoparticles were used to prepare the conjugate pad of the magnetic LFIA of NT-proBNP. Another monoclon antibody specific to NT-proBNP (capture antibody) and secondary antispecies antibodies were immobilised at test line and control line, respectively. Then the magnetic LFIA for detection of NT-proBNP were established and applied to test standard samples of different NT-proBNP concentrations. The magnetic field produced by MNFs in the test line are measured by a high sensitive magnetic assay reader. From the linear relation between magnetic signal intensities and NT-proBNP concentrations, we can achieve quantitative detection of NT-proBNP. Some factors which may influence the detection sensitivity of this system were also studied, such as the amount of antibody immobilised in the Test line and the amount of antibody per MNF.