**Relationship between polymorphism of ACE and the curative effect of metoprolol on chronic heart failure**

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**Objective** To investigate the effect of metoprolol on chronic heart failure and to discuss the relationship between polymorphism of ACE and the curative effect of metoprolol.

**Methods** 118 patients with chronic heart failure were included randomly and were divided into two groups. In control group (group A), the patients were treated with benazapril 2.5–10 mg once daily and routinely, in treatment group the patients were treated additionally with metoprolol 12.5–100 mg once daily. The period of treatment for all patients was 2 years. ACE polymorphism was detected by a PCR.

**Results** The patients encountered heart failure, malignant infarction, malignant arrhythmia and sudden death in metoprolol group were lower than those of control group, the difference was significant (p<0.05). FRA was significant increased and AngII, ALD were significant lowered in two groups after treatment. The frequency of DD genotype in metoprolol effective group was 0.47 and that in control group was 0.52. The effective rate of DD genotype was 76.9%, that of ID genotype was 54.2%, and the effective rate of ID genotype was 42.1%.

**Conclusion** Adding metoprolol to the treatment of chronic heart failure can improve heart function. The polymorphism of the ACE (I/D) is helpful for the diagnosis of the therapeutic efficacy of metoprolol in chronic heart failure.

**Clinical significance of autoantibodies against cardiac troponin I in patients with myocardial infarction and chronic heart failure**

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**Objective** Autoantibodies against cardiac troponin I (cTnI) have been described in the serum from patients with dilated cardiomyopathy and heart failure. The clinical significance of these autoantibodies remains unknown. The present study was designed to evaluate the relationship between the serum level of autoantibodies against cardiac troponin I and the prognosis of patients with myocardial infarction (MI) and chronic heart failure (CHF).

**Methods** 97 patients were studied in the present study, including 38 patients (65.3±7.9 years, 28 males) with MI and 59 patients (65.3±14.6 years, 44 males) with CHF. The patients were recruited in the First Affiliated Hospital of Nanjing Medical University from 2005 to 2008. 78 healthy control subjects were enrolled in the study. The
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- Imaging in Cardiovascular Disease (Radiology, Ultrasound, Nuclear Medicine, CT, MRI)
- Right ventricular ejection fraction further decreases in heart transplanted HT patients when rejection occurs

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**Right Ventricular Ejection Fraction Further Decreases in Heart Transplanted HT Patients When Rejection Occurs**

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**Objective**
To investigate the shape and function of right ventricles in patients who received heart transplantation (HT) using single-beat real-time three-dimensional echocardiography (sRt-3DE).

**Methods**
60 healthy volunteers (40 male, mean age (43.69±14.81 years)) and 31 HT patients (27 male, mean age (40.10±14.67 years)) were enrolled consecutively as Normal controls and the HT group, respectively. All the participants received routine echocardiography as well as sRt-3DE by SIEMENS SC2000 to get parameters concerning morphology and systolic function of the right ventricle. All the HT patients received endomyocardial biopsy within 3 months before or after the echo exams and the HT group was further divided into the rejection group (HTr) and the non-rejection group (HTn) according to the endomyocardial biopsy results as well as the long term group (HTl) and the short term group (HTs) based on the post-operation length (cut point: 1 year), respectively. HTn was also divided into a long term group (HTnl) and a short term group (HTns) to rule out the influence of rejection on post-operation length.

**Results**
1. Right ventricular stroke volume and right ventricular ejection fraction (RVEF) were significantly different among the groups and the difference values progressively decreased. (Right ventricular stroke volume: Con vs HTn vs HTl vs HTs = 36.08±10.94 vs 26.22±9.84 (p<0.0001); RVEF: Con vs HTn vs HTl vs HTs = 62.09±7.18 vs 51.04±7.58 vs 35.66±9.86, p<0.00001). 2. When taking the influence of rejection into consideration, none but RVEF proved to be a stable and sensitive indicator.

**Conclusions**
S-Rt-3DE can quickly assess shape and systolic function of right ventricle. RVEF is the most stable and sensitive among all the RV-related and LV-related indicators and is a promising indicator in the clinic follow-up of HT patients.