**Effect of Different Doses of Simvastatin on the Rabbits with Congestive Heart Failure**

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Objectives To investigate the cardioprotection and its mechanism of the different doses of simvastatin on cardiomyocyte apoptosis induced by myocardium of rabbits with congestive heart failure.

Methods Sixty male wistar rabbits were randomly divided into five groups: normal control group (n = 12), high dose group (n = 12, HF + S, received simvastatin 3mg · kg -1 · d -1 by gastric irrigation diet for 12 weeks), middle dose group (n = 12, HF + S, received simvastatin 1.5mg · kg -1 · d -1 by gastric irrigation diet for 12 weeks), little dose group (n = 12, HF + S, received simvastatin 0.3mg · kg -1 · d -1 by gastric irrigation diet for 12 weeks) and heart failure group (n = 12). Left ventricular remodeling and function were evaluated by echocardiography and hemodynamic measurements 10 weeks after operation. The apoptotic cardiomyocytes of myocardial tissue were tested by TUNEL, sFas were measured with ELISA.

Results Left ventricular ejection fraction (LVEF) and left ventricular end-systolic diameter (LVESD) improved significantly (P < 0.05) in the MD-SIM compared with those LD-SIM, HD-SIM and CHF. HE shows that there are severe fibrosis and inflammatory cell infiltration in CHF; however, there were less fibrosis and inflammatory cell infiltration in the MD-SIM compared with those LD-SIM and HD-SIM. Compared with normal control group the numbers of apoptotic cardiomyocytes as well as the expression of sFas in myocardial tissue were significantly increased in HF group (P < 0.01 or 0.05). LD-SIM and MD-SIM and HD-SIM have the expression of sFas and numbers of apoptotic cardiomyocytes, but only the MD-SIM in myocardial tissue were remarkably reduced in simvastatin groups.

Conclusions Apoptosis is associated with the development of HF, sFas which may play a role in acceleration of apoptosis. The simvastatin can inhibit the myocardocyte apoptosis, 1.5mg · kg -1 · d -1 of simvastatin is the best option.

**Relationship Between Plasma ADAMTS-7 and Heart Failure in Acute Myocardial Infarction Patients.**

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Objectives To detect plasma ADAMTS-7 in acute myocardial infarction patients and the relationship between BNP and ADAMTS-7.

Methods Altogether 42 STEMI (ST elevated myocardial infarction) patients, 30 NSTEMI (non ST elevated myocardial infarction) patients, and 38 controls were included. ELISA was used to measure plasma ADAMTS-7. The relationship between BNP and ADAMTS-7 were calculated by linear correlation.

Results Plasma ADAMTS-7 in STEMI group, NSTEMI group and control group were 5.08 ± 3.35ng/ml, 4.67 ± 3.57ng/ml and 1.63 ± 1.58ng/ml respectively. Myocardial infarction group elevated significantly (P<0.05) than control group. Plasma ADAMTS-7 had positive relations with BNP (P<0.05).

Conclusions Elevated ADAMTS-7 level may be a mechanism for heart failure in acute myocardial infarction patients.

**Presentation, Treatment and Prognosis of Acute Heart Failure in the Emergency Department: A Prospective, Cohort, Multicentre, Non-Interventional Registry Study**

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Objectives The purpose of this study was to assess the clinical characteristics, treatments, and prognosis of acute heart failure (AHF) in the emergency department.

Methods A prospective, cohort, multicentre, non-interventional registry study of consecutive patients with AHF who visited in 14 emergency departments was conducted in Beijing. We collected baseline and current AHF episode data from March 2011 to March 2012.

Results A total of 3346 cases of AHF patients included in the study. The mean age was 67 ± 16 years, 58.3% were male, and 97.3% were Han race. The most common comorbid conditions were diabetes (996 cases, 73%), pulmonary disease (757 cases, 22.6%), chronic renal insufficiency (561 cases, 16.8%) and thyroid disease (89 cases, 2.7%). The presenting signs and symptoms which including chest distress/shortness of breath (3257 cases, 97.3%), fatigue (2433 cases, 72.7%), paroxysmal nocturnal dyspnea (2178 cases, 65.1%), orthopnea (1749 cases, 52.3%), oedema of lower trunk (1900 cases, 56.8%) and bloating and ascites (820 cases, 4.5%) were recorded. Patients with NYHA class II, III and IV were 79 cases (2.4%), 341 cases (10.2%), 1131 cases (33.8%) and 1785 cases (53.3%), respectively. A history of coronary artery disease was common (1738 cases, 57%) in the registry patients, which including 936 cases of angina, 394 cases of acute myocardial infarction (Killips class III and IV were 102 cases and 80 cases, respectively), 721 cases of old myocardial infarction and 45 cases of ventricular aneurysm. A history of hypertension (1974 cases, 59%) was commonly present as well. Other important conditions included history of cardiomyopathy (588 cases, 17.6%) and valvular heart disease (422 cases, 12.6%). In the study, 1378 cases of patients with smoking history, which accounting for 41.2%, and 826 patients with history of drinking (24.7%). Among the enrolled patients, acute left-side heart failure were 2147 cases (64.2%), acute right-side heart failure were 191 cases (5.7%) and the whole heart failure 1008 cases (30.1%). The medication profiles in the emergency department on admission were also recorded. Intravenous diuretic therapy, oral diuretic therapy, vasodilator, bronchial spasmylic, antisterone and beta-blockers were noted in...
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