The ratio of NT-proBNP/BNP is better for predicting in-hospital outcomes in congestive heart failure (CHF).

**Conclusions**

BNP was an independent predictor for both in-hospital mortality and duration in hospital. Multiple regression analysis showed that the ratio of NT-proBNP/BNP was significantly related with BMI, BNP, NT-proBNP, and their ratio for in-hospital outcomes in CHF patients. The LVM and LV volume are much larger and there is a sphericity trend of LV in EH patients with AF. However, there is a deviation of sphericity of left atrial in EH patients with AF. The LVSI, LAD and LASI were independent factors associated with AF in patients with hypertension (OR:0.847, 95% CI 6.141–138.590, p<0.01; OR: 0.811, 95% CI 0.738–0.891, p<0.01; OR: 65.856, 95% CI 0.764–9.942, p<0.01).

**Conclusions**

Compared to SR group, AF group has significant variation in the type of left ventricular geometric remodelling in EH patients. The development of AF, the degree of left ventricular geometric remodelling and duration in hospital and it might be useful to predict short term outcomes in patients with acute exacerbation of heart failure.

**Objectives**

BNP and NT-proBNP are important cardiac biomarkers in the diagnosis and prognosis of congestive heart failure (CHF). However, the prognosis value of their ratio in patients with CHF is not clear. The goal of this study was to examine the prediction value of BNP, NT-proBNP and their ratio for in-hospital outcomes in CHF.

**Methods**

In a cross-sectional study, patients with acute onset of CHF and admitted to cardiac care unit in Juntendo Hospital were enrolled from Jan to Dec 2009. We measured the serum level of BNP and NT-proBNP at the same time after admission, and other biomarkers were also measured and collected. The results were statistically analysed by software JMP 7.

**Results**

A total of 193 patients were enrolled, with a mean age of 71.3±12.8 years old. 17 patients died in hospital, with a mortality rate of 8.8%. Univariate analysis showed that in-hospital mortality of BNP, NT-proBNP and their ratio for in-hospital outcomes in CHF patients with hypertension (OR:0.847, 95% CI 6.141–138.590, p<0.01; OR: 0.811, 95% CI 0.738–0.891, p<0.01; OR: 65.856, 95% CI 0.764–9.942, p<0.01).

**Background**

Essential hypertension (EH) is the common cause of left ventricular (LV) geometric remodelling which includes shape remodelling, volume remodelling and mass remodelling. The relation between the type of LV geometric remodelling and atrial fibrillation (AF) in patients with EH was unknown.

**Objectives**

To explore the relation between the type of left ventricular geometric remodelling and AF in patients with EH.

**Methods**

16 New Zealand rabbits were randomly divided into two groups: ischaemia-reperfusion injury group (control group) and Rosuvastatin group (drug group). Establish the myocardial ischaemia-reperfusion injury in rabbits and the effect of Rosuvastatin.

To study the change of endothelial function during myocardial ischaemia-reperfusion injury in rabbits and the effect of Rosuvastatin.

**Results**

Compared to SR group, AF group has lower systolic blood pressure and diastolic blood pressure (138.85±19.89 mm Hg vs 149.80±25.17 mm Hg; 80.57±13.04 mm Hg vs 85.97±15.81 mm Hg, p<0.01) and larger LVM, LVEDV, LVEFS and LSVI (108.19±27.52 g vs 99.69±21.61 g, p<0.05; 199.20±57.00 ml vs 181.92±50.62 ml, p<0.05; 45.52±20.03 ml vs 37.60±15.03 ml, p<0.01; 0.715±0.043 vs 0.682±0.040, p<0.01), although LASI was significantly smaller (0.740±0.081 vs 0.779±0.08, p<0.01). Given covariates were adjusted in the logistic regression model, the LSVI, LAD and LASI were independent factors associated with AF in patients with hypertension (OR:0.847, 95% CI 6.141–138.590, p<0.01; OR: 0.811, 95% CI 0.738–0.891, p<0.01; OR: 65.856, 95% CI 0.764–9.942, p<0.01).

**Conclusions**

Compared to SR group, AF group has significant variation in the type of left ventricular geometric remodelling in EH patients. The development of AF, the degree of left ventricular geometric remodelling and duration in hospital and it might be useful to predict short term outcomes in patients with acute exacerbation of heart failure.