and LVEF was measured. Serum creatinine (Scr) was measured before and after administered the medication 24 h, 48 h, 72 h, 7 days and 14 days using simplified MDRD equation to calculate estimated glomerular filtration rate (eGFR). Recording the major adverse cardiac events (MACE) occurrence within 30 d.

**Results**

rhBNP group has a less dyspnoea time than the control group; The plasma BNP levels significantly lower than before treatment at different time point in the two groups. The LVEF was significantly higher in treatment group compared with baseline levels after treatment 24 h, while LVEDD significantly decreased even after discontinuation the treatments, which remain so when the 30 days. The LVEF and LVEDD improvements in rhBNP group were significantly better than in the control group after treatment 24 h, 14 days; At day 7 after PCI, the Scr lowered to the baseline level in the rhBNP group. The eGFR after PCI was higher in the rhBNP group than that in the control group. The occurrence of CIN was significantly lower in the rhBNP group than in the control group. The MACE event of 30 days in rhBNP group was significantly lower than the control group.

**Conclusion**

rhBNP can promptly and effectively improve the heart function, reduce the incidence of MACE rate in acute myocardial infarction with heart failure patients, which also had a renal function protective effect in patients with and decreased incidence on CIN.

**Objective**

To investigate the clinical characteristics of acute myocardial infarction (AMI) in young patients.

**Methods**

We carried out the contrasting analysis in the clinical data between 45 young patients (age≤45 years old) and 52 old patients (age≥60 years old).

**Results**

Young AMI patients were often male, and had the typical clinical manifestations. The smoking rate, hyperbrinogenemia rate and positive family history rate of the young people group were markedly higher than those of the old people group (p<0.05). The morbidity rate of patients with single coronary artery atherosclerosis was high in the young people group. The morbidity rate of patients with multiple coronary artery atherosclerosis was high in the old people group. The patients in the old people group who complicated with cardiac aneurysm, arrhythmia, heart failure, cardiac shock were much more than those in the young people group (p<0.05).

**Conclusion**

Smoking, hyperbrinogenemia and positive family history are main causes of AMI in young patients. Young AMI patients had the typical clinical manifestations with simple coronary lesion. The complications in the young people group are less than those in the old people group, and the prognosis was better than old cases.