hypertensive early renal damage. We also assessed the plasma homocysteine (Hcy) level in relation to hypertensive early renal damage in the study.

**Methods:** This cross-sectional study involved 244 hypertensive patients aged 24 to 89 years. These patients were divided into no renal damage group (NRD group, n=141) and early renal damage group (RD group, n=103) according to the urinary albumin/creatinine ratio (UACR). Early renal damage was defined as microalbuminuria which was ≥30 and <300 mg/g. MTHFR C677T polymorphism was genotyped by Taqman probe. All patients underwent the following procedures: personal history, blood pressure measurements, plasma Hcy and urinary microalbumin.

**Results:** (1) The MTHFR C677T gene mutation in the NRD group and RD group was not significantly different (P=0.05). (2) The plasma Hcy in the MTHFR CC group, CT group and TT group was not significantly different (11.12±3.86, 13.32±15.54, 15.20±5.31, P=0.05). (3) The plasma Hcy in the male patients and female patients was not significantly different (14.9±14.40, 12.6±5.56, P=0.05). However, the plasma Hcy level is significantly higher in TT group compared with CC group and CT group (10.00±3.25, 11.78±5.64, 14.71±5.64, P<0.01) if analysis female patients only. Furthermore, among female patients with early renal damage, the plasma Hcy level is significantly higher in TT group compared with CC group (9.38±2.75, 13.71±5.79, P<0.01). (4) The UACR in the infants of RD group and TT group was not significantly different (37.25±38.09, 58.41±84.31, 50.0±72.17, P>0.05). However, among patients with early renal damage, the UACR is significant higher in CT group compared with CC group (64.82±42.36, 132.53±99.45, P<0.05). Furthermore, among female patients with early renal damage, the UACR is significant higher in CT group compared with CC group and TT group (41.75±8.21, 161.46±98.59, 81.74±62.08, P<0.01). (5) Genetic model analysis showed that after adjusting sex and age, MTHFR recessive and additive model were significantly associated with plasma Hcy. The CT group had the greatest odds (P<0.01). (6) Genetic model regression analysis showed that after adjusting sex and age, none of recessive, dominant and additive model were associated with UACR in hypertensive patients (P>0.05).

**Conclusions:** MTHFR C677T gene mutation was associated with plasma Hcy, but not with early renal damage in hypertensive patients.

**GW25-e4241**

**The Characteristics and Trends in Hospitalization for Congenital Heart Disease from 2007 to 2012 in Beijing, China**

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**Objectives:** We aimed to examine the characteristics and trends in hospitalization for CHD in Beijing.

**Methods:** Data from the Hospital Discharge Information System were used to identify all patients hospitalized in Beijing who were hospitalized with the primary discharge diagnosis of CHD in 2007-2012. The patients hospitalized in Beijing included patients of permanent residents in Beijing and patients of nonlocal. The patients of permanent residents in Beijing can be recognized by geography and demographic information. Numbers of permanent residences in each year in Beijing were obtained from the Beijing Municipal Bureau of Statistics. The crude and standardized rates of CHD hospitalization calculated in MS Excel and Poisson regression was used to explore the trend in hospitalization for CHD in Beijing.

**Results:** The atrial septal defect (ASD), ventricular septal defect (VSD), patent ductus arteriosus (PDA), and tetralogy of Fallot (TOF) ranked the top 5 in the hospitalization of Beijing residents, the proportion of which were respectively 28.8%, 26.2%, 10.6%, 4.4%. The adult patients accounted for 45.4% of the CHD patients in permanent residents. Male accounted for 54.8% in severe CHD patients permanent residents. The standardized hospitalization rates increased from 10.9 per 100, 000 in 2007 to 12.1 per 100, 000 in 2011, followed by a significant decline in 2012 (10.1 per 100, 000, P=0.05). The incidence in infants age 1 to 4 years of age was significantly higher than that observed in the remainder.

**Conclusions:** A large proportion of CHD infants were adults. Males have a higher proportion of severe CHD than females. The rates of CHD hospitalization increased in 2007-2011, and significantly decreased in 2012, which might be associated with the national health education and the necessity of the prenatal screening for pregnant women.

**GW25-e4300**

**Epidemiological, clinical and pathological features of the unexplained sudden death cluster in the mountain area of Yunnan province in China: a retrospective study of 44 cases from 1975 to 2013**

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**Objectives:** Although numerous previous studies showed that renal dysfunction is associated with poor cardiovascular outcomes with acute coronary syndrome (ACS), there are limited data about the impact of renal dysfunction on the long-term outcome of patients with acute ST-segment elevation myocardial infarction in China. The aim of our study is to investigate the association of renal dysfunction on admission and in-hospital and long-term outcome in patients with acute ST-segment elevation myocardial infarction in Beijing.

**Methods:** In the prospective multicenter study, 718 consecutive patients were admitted to 19 hospitals in Beijing within 24 hours after the onset of STEMI between December 2005 and January 2007. Estimation of glomerular filtration rate (eGFR) was conducted by the abbreviated MDRD equation. The patients were categorized according to eGFR: renal reservation (eGFR ≥60 ml/min/1.73 m²), renal dysfunction (eGFR<60 ml/min/1.73 m²). The association between renal dysfunction and in-hospital and six-year outcome was studied. Multivariable logistic regression and Cox regression analysis were performed to examine the independent prognostic value of renal dysfunction on in-hospital and six-year survival.

**Results:** 135 patients (18.5%) reached a level of renal insufficiency (eGFR<60 ml/min/1.73 m²). Patients with renal dysfunction were more often female and older, with history of hypertension, diabetes and heart failure and had a higher killip class. Patients with renal dysfunction were less likely to present with chest pain and tended to have fewer prodromal symptoms. The in-hospital mortality, six-year mortality (P=0.001), six-year all-cause mortality (35.4% vs 11.4%, P<0.001)and six-year cardiac mortality (15.9% vs 5.7%, P<0.001) were markedly increased in patients with renal dysfunction. After adjusting for other confounding factors, renal dysfunction was an independent predictor of in-hospital mortality (8.1% vs 3.1%, P=0.001), six-year mortality (35.4% vs 11.4%, P<0.001), six-year all-cause mortality (35.4% vs 11.4%, P<0.001), six-year cardiac mortality (8.1% vs 3.1%, P=0.001), six-year all-cause mortality (8.1% vs 3.1%, P=0.001) and six-year cardiac mortality (8.1% vs 3.1%, P=0.001).

**Conclusions:** Renal dysfunction is very common in STEMI patients in China. The independent predictor, the six-year all-cause mortality, cardiac mortality rate in STEMI patients with renal dysfunction were higher than those without it. Renal dysfunction evaluated by eGFR is an important independent predictor of short-term and long-term outcome in patients with acute ST-elevation myocardial infarction.