were defined by LV relative wall thickness and LV mass indexed to height (gram/height in m2.7). Multivariable logistic regression analyses were performed to define young adulthood determinants of LV geometric patterns.

**Results** The prevalence of normal geometry, concentric remodelling, eccentric and concentric hypertrophy were 79.0%, 7.6%, 8.7% and 4.7% respectively. Males showed significantly higher prevalence for concentric remodelling and eccentric hypertrophy than females (5.6% vs 2.0% and 6.4% vs 2.3%, p<0.01), however such differences were not noted for normal geometry and concentric hypertrophy (p>0.05). Using the normal geometry as reference, with eccentric and concentric hypertrophy showed significantly higher levels of BMI (36.3 kg/m2 and 38.6 kg/m2 vs 27.2 kg/m2, p<0.001), SBP (127.5 mm Hg and 137.2 mm Hg vs 114.7 mm Hg, p<0.001), DBP (85.2 mm Hg and 89.7 mm Hg vs 75.3 mm Hg, p<0.01), glucose (111.2 mg/dl and 129.3 mg/dl vs 85.2 mg/dl, p<0.01), DM (24.3% and 41.6% vs 4.3%, p<0.001) and triglycerides (156.8 mg/dl vs 128.5 mg/dl, p<0.001) and total/HDL-C ratio (4.9 vs 4.1, p<0.01) were significantly higher in eccentric hypertrophy only. However, none of these risk factors differed significantly between normal geometry and concentric remodelling groups (p>0.05). In Multivariable logistic regression models age, gender, BMI, SBP, DBP, glucose, DM, triglycerides and total/HDL-C ratio, male gender was related to concentric remodelling hypertrophy (OR = 2.58, 95% CI 1.21 to 5.64, p = 0.019), BMI was related to eccentric hypertrophy (OR = 1.16, 95% CI 1.08 to 1.20, p = 0.001) and DM was related to concentric hypertrophy (OR = 6.35, 95% CI 3.24 to 5.50, p = 0.002).

**Conclusions** These findings showed that eccentric hypertrophy and concentric hypertrophy were more frequent and male gender, obesity and DM were significant determinants of these patterns of adverse cardiac remodelling in young adults.

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**THE EFFECT OF ALDH2 GENETIC POLYMORPHISM ON MYOCARDIAL ISCHAEMIA REPERFUSION INJURY IN CHINESE**

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**Background** Recently, several animal studies investigated the relation between ALDH2 and cardiac ischaemia/reperfusion injury, but the results were controversial. Meanwhile, no relevant researches on population have been reported. And It is well known that acetaldehyde dehydrogenase 2 (ALDH2) has a significant variation in a single-nucleotide polymorphism of so-called G487A polymorphism in Asian, where the mutant allele is carried by nearly 50% of east Asians which has significant reduced or completely lost catalytic activity than people with ALDH2*1/*1 genotype.

**Objective** To investigate the association between ALDH2 G487A polymorphism and myocardial ischaemia/reperfusion injury in Chinese.

**Methods** We serially measured the release of troponin I (cTNI) and creatine kinase MB (CKMB) in 148 patients with acute myocardial infarction. The extent of cardiac injury was estimated by cTNI and CKMB respectively. Meanwhile, ALDH2 genotype was detected as well as other clinical parameters. Logistic regression analysis was used to analyse the association between the ALDH2 genotypes and myocardial ischaemia/reperfusion injury.

**Results** In 146 patients with acute myocardial infarction whose myocardial injury was estimated by cTNI (p = 0.040) and in patients with STEMI undergoing PCI whose myocardial injury was estimated by cTNI (n = 72, p = 0.018) and CKMB (n = 67, p = 0.035) respectively, the proportion of individuals with mutant allele was higher in patients with smaller injury than in that with larger. ALDH2 genetic mutation may be an independent protective factor for patients with acute myocardial infarction undergoing PCI (OR 0.264, p = 0.034) and patients with STEMI undergoing PCI (OR 0.264, p = 0.034) when injury was assessed by cTNI but not CKMB.

**Conclusions** ALDH2 G487A polymorphism is possibly associated with myocardial ischaemia/reperfusion injury in Chinese. ALDH2 geneic mutation (G487A) may confer independent cardioprotection in patients with acute myocardial infarction undergoing PCI and those with STEMI undergoing PCI.