not well characterized. The current study investigated the relationship between triglyceride and arterial stiffness in a community-based longitudinal sample from Beijing, China.

**METHODS** A total of 1447 subjects were initially eligible for the prospective study. We measured carotid-femoral pulse wave velocity (cf-PWV). Plasma triglyceride, high density lipoprotein cholesterol, low density lipoprotein cholesterol, total cholesterol and alcohol intake were also tested in these subjects. In this prospective study, all subjects was classified into four groups according to triglyceride level. A forward stepwise multivariate logistic regression analysis was performed to obtain the odds ratios (OR) and 95% confidence intervals (CI) of TG for each tertile (<1 m/L vs 1-1.2 m/L vs ≥1.2 m/L). Pearson correlation, Partial correlation, Multiple linear regression analysis was performed to analyze the association between cf-PWV and characteristic variables.

**RESULTS** The multiple logistic regression analysis revealed that the higher triglyceride levels were significantly associated with elevated cf-PWV after adjusting for confounded factors. Compared with the first quartile, the adjusted OR of cf-PWV in the second, the third and the forth quartiles were 1.187 (95% CI: 0.761-1.83, p = 0.450), 1.385 (95% CI: 1.062-1.806, p = 0.016), 1.236 (95% CI: 1.018-1.501, p = 0.032); In Pearson correlation, Partial correlation, Multiple linear regression analysis among China, women positively associated with cf-PWV ($r = 0.009, P = 0.001$) ($r = 0.094, P = 0.001$) ($r = 0.284, P = 0.007$). The level of triglyceride in elevated PWV was significantly higher than in normal cf-PWV1.917±1.27 vs 1.748±1.24, p = 0.017.

**CONCLUSIONS** The present study clearly demonstrated an association between triglyceride and arterial stiffness, indicating that triglyceride was an independent predictive factor for arterial stiffness in a community-based population.

**GW26-e2432**

**Modifiable risk factors in isolated septal defects in Guangdong, China**

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**OBJECTIVES** Ventricular septal defects (VSDs) and atrial septal defects (ASDs) are the most common types of congenital heart defect (CHD). If even a fraction of these defects could be prevented by decreasing maternal or paternal exposure, this would result in improved reproductive outcome and a tremendous saving of health care moneys. Although these two defects are two typical septal defects in the heart, they may be sensitive to different spectrum of risk factors. And few study investigated the risk factors for association of VSD and ASD. This study aimed to explore risk factors by isolated VSD, ASD and association of VSD and ASD in Southern China, Guangdong Province.

**METHODS** This is a population-based case-control study basing on the Guangdong Registry of Congenital Heart Disease study, 2004-2013. Totally 940 isolated and simple VSD cases, 444 ASD cases and 283 association of VSD and ASD cases, and their 1:1 matched controls were enrolled in the current analysis. Univariate logistic regression was used to screen potential risk factors. Conditioned multivariate logistic regression was used to compute adjusted ORs while simultaneously controlling for confounders.

**RESULTS** We found the common risk factor for these three groups was residence proximity to main traffic areas less than 50 meters with OR ranging from 1.69 (95% CI: 1.05, 2.72) to 7.36 (95% CI: 3.10, 17.48), and paternal alcohol intake with OR ranging from 3.27 (95% CI: 1.29, 9.54) to 3.82 (95% CI: 1.72, 8.47). Specific risk factors for VSD was maternal age older than 40 years old (OR: 5.13, 95% CI: 1.10, 23.84), maternal occupation as housekeeper (OR: 2.01, 95% CI: 1.0, 3.58) and Chinese herb use (OR: 1.98, 95% CI: 1.05, 3.58). Specific risk factors for ASD was maternal occupation as office staff (OR: 4.03, 95% CI: 1.81, 999,63). Among all the potential risk factors, maternal environmental exposures (chemical contact, living in newly-remodeled rooms, residential proximity to traffic <50m, and certain maternal occupations) and maternal perinatal diseases and medication use factors (maternal fever, influenza, threatened abortion, antibiotic and Chinese herb use) were two dominant groups of risk factors. Paternal exposure before pregnancy was also significant risk factors for association of septal defects. We found dose-response relationships between the number of maternal environmental exposure factors and the risk of isolated septal defects.

**CONCLUSIONS** VSD, ASD, association of VSD and ASD were sensitive to different spectrum of risk factors. Maternal environment risk exposures, maternal perinatal diseases and medication use at 1st trimester, and paternal alcohol intake and smoking was associated with occurrence of most septal defects in Guangdong population. The current study further our knowledge regarding changeable risk factors for septal defects.

**GW26-e2926**

**Study on the distribution of three SNPs (ALDH2rs671, CETPrs2303790, MTHFRrs1801133) in cardiovascular related genes and risk of cardiovascular disease in Zhangzi island population**

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**OBJECTIVES** The three SNPs (ALDH2rs671, CETPrs2303790, MTHFRrs1801133) is associated with cardiovascular disease and hypertension in the Chinese population, but the distribution of SNPs in Zhangzi Island is not clear. The purpose of this study is to investigate the association between the SNP and risk factors that is closely correlated with cardiovascular disease and high blood pressure in Zhangzi Island in China.

**METHODS** A total of 180 subjects in Zhangzi Island were examined the association of the SNPs with cardiovascular risk factors that related with metabolic traits(triglycerides), total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, glucose, casual spot and predict 24h urinary sodium, potassium and creatinine, the diastolic blood pressure (DBP) and systolic blood pressure (SBP). The SNPs were genotyped by the TaqMan real-time polymerase chain reaction assay.

**RESULTS** rs671 SNP in ALDH2 was significantly associated with LDL-C (OR: 3.01). After adjusting for age, sex, BMI, we found that the rs671 SNP in ALDH2 gene significantly increased SBP (P = 0.05, β=5.953). There were significant associations between DBP and 24h urinary sodium (P = 0.05). There was no association detected for SNPs in CETP or MTHFR gene with cardiovascular disease and blood pressure in Zhangzi Island population. To observe these correlations, further analysis and greater sample size with high risk factors with cardio-cerebrovascular diseases are needed.

**GW26-e3861**

**Prevalence of dyslipidemia and associated factors among the hypertensive population from rural Northeast China: an update**

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**OBJECTIVES** The last study reported the prevalence of dyslipidemia in hypertensive residents from rural Northeast China was conducted approximately ten years ago. The purpose of this study was to update the prevalence and epidemiological features of dyslipidemia.

**METHODS** A cross-sectional survey was conducted from July 2012 to August 2013 through a cluster multistage sampling to a resident group of 599 individuals with hypertension (4048 vs. 1871, without vs. with antihypertension treatment), age ≥ 35 years, in the rural Northeast China. Serum lipids level were proposed by National Cholesterol Education Program Adult Treatment Panel III.

**RESULTS** Of the hypertension residents without antihypertension treatment 34.5% had borderline high total cholesterol (TC), 19.2% had high TC, 11.4% had low-high density lipoprotein cholesterol (HDL-C) and 37.4% had high non-HDL-C. The population with borderline high, high, and very high low-density lipoprotein cholesterol (LDL-C) was 20.9, 6.7, and 2.3%, respectively. In addition, 14.3% had borderline high triglycerides (TG), 17.4% had high TG and 2.4% had very high TG. The awareness rate of dyslipidemia among the study population was 5.9%. After adjusting for independent variables, fasting plasma glucose (FGP), body mass index (BMI), Ham nationality, current drinking and smoking, higher annual income and classification of blood pressure were risk factors for dyslipidemia while moderate physical activity was protective factor for dyslipidemia. On the contrary, gender and current drinking decrease the risk of HDL-C.

**CONCLUSIONS** The prevalence of dyslipidemia was dramatically high and exhibited increasing trend in hypertensive rural Northeast Chinese. Dyslipidemia screening was in-need in all diagnosed hypertensive individuals.