

CI =1.002-2.389,  $P = 0.049$ ). Furthermore, subgroup analyses also displayed significant associations between MMP-1 rs1144393 polymorphism and susceptibility to acute myocardial infarction (AA/AG vs.GG: OR =1.275, 95% CI =1.016-1.600,  $P = 0.036$ ) or unstable angina pectoris subjects (A vs.G: OR =2.128, 95% CI =1.696-2.670,  $P < 0.001$ ; AA vs.GG: OR =2.933, 95% CI =1.339-6.421,  $P = 0.007$ ; AA vs.AG/GG: OR =2.477, 95% CI =1.457-4.211,  $P = 0.001$ ). But we found no significant association between the -519 A/G polymorphism and ACS either in Asian or Caucasian.

**CONCLUSIONS** Our meta-analysis suggests that MMP-1 -519A/G polymorphism was associated with the susceptibility to ACS. However, further large scale case-control studies with rigorous design should be conducted to confirm above conclusions in the future.

#### GW26-e3820

##### The SNP rs4804611 in ZNF627 Gene and the Risk of Myocardial Infarction: A Meta-Analysis

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**OBJECTIVES** A single nucleotide polymorphism (rs4804611) in zinc finger protein 627 (ZNF627) gene has been demonstrated to be associated with the susceptibility to myocardial infarction (MI), but the results are inconsistent.

**METHODS** A meta-analysis of eligible studies reporting the association between rs4804611 and MI was carried out to enhance the reliability of published results. A systematic literature search was performed using PubMed, Web of Science, Cochrane Library to search English articles concerning the relation between rs4804611 and MI up to January, 2015. Summary odds ratios (OR) and 95% confidence interval (CI) were used to evaluate the risk of MI. The heterogeneity and publication bias of this study were also evaluated.

**RESULTS** Five eligible studies involving 11639 subjects (6299 patients and 5340 healthy controls) were included in this meta-analysis. Overall, the results indicated that rs4804611 polymorphism was associated with the risk of MI (GG vs. AA/AG: OR = 0.833, 95% CI = 0.704-0.985,  $P = 0.033$ ). Furthermore, subgroup analyses also showed that rs1801157 rs4804611 polymorphism was associated with the risk of MI in Caucasian (GG vs. AA/AG: OR = 0.839, 95% CI = 0.704-0.999,  $P = 0.048$ ).

**CONCLUSIONS** In conclusion, our meta-analysis suggests that the rs4804611 polymorphism in ZNF627 gene is associated with the risk of MI. However, further large scale case-control studies with rigorous design should be conducted to confirm the conclusion in the future.

#### GW26-e3865

##### The Prevalence and Predictors of Metabolically Healthy Obesity in Obese Rural Population of China

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**OBJECTIVES** Firstly, to examine the prevalence of Metabolically Healthy Obesity (MHO) in rural area of China, and identify contributing determinants of MHO, Secondly, to comprehensively investigate to the different characteristics between MHO and Metabolically Unhealthy Obesity (MUO).

**METHODS** We conducted a population-based cross-sectional study of 2037 participants with obesity in rural Liaoning Province during 2012-2013. Obesity was defined as BMI  $\geq 28$  kg/m<sup>2</sup> and metabolically healthy was defined as not having the Metabolic syndrome.

**RESULTS** The prevalence of MHO was 23.1%, but significant decreased with advancing age in female group (39.5% in subjects 35-44 years of age, and 7.0% in subjects  $\geq 65$  years), However there was no significant tendency with advancing age in male group. Independent determinant factors for MHO were age  $< 55$  years (odds ratio [OR] 1.659;  $P = 0.001$ ), non-current smoking (OR 1.397;  $P = 0.038$ ), pre-menopause (OR 1.648;  $P = 0.030$ ) and non-hyperuricemia (OR 2.317;  $P < 0.001$ ), whereas race, gender, diet score, current drinking, marriage, sleep duration, hyperhomocysteinemia, levels of physical activity, annual income and educational status were not significant contributors.

**CONCLUSIONS** The prevalence of MHO is normal in rural area of China. age  $< 55$  years, non-current smoking, pre-menopause and non-hyperuricemia were identified as independent determinant factors for MHO in this population.

#### GW26-e3860

##### Hyperuricemia is independently associated with left ventricular hypertrophy in postmenopausal women but not in premenopausal women in rural Northeast China

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**OBJECTIVES** To estimate the relationship between hyperuricemia, left ventricular hypertrophy and to investigate whether menopause was associated with the relationship between hyperuricemia and left ventricular hypertrophy.

**METHODS** This survey was conducted from July 2012 to August 2013. A total of 6029 women (3508, 58.2% were post-menopause) from the rural Northeast China were randomly selected and examined. Left ventricular hypertrophy was defined using the 2007 Guidelines for the Management of Arterial Hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC).

**RESULTS** Age, body mass index, glucose, estimated glomerular filtration rate and lipid level were significantly correlated with serum uric acid level. Left ventricular hypertrophy (LVH) showed a gradual increase in accordance with the serum uric acid level in entire study population ( $< 4.0$  mg/dL, 11.4%; 4 to  $< 5$  mg/dL, 14.9%; 5 to  $< 6$  mg/dL, 18.9%;  $\geq 6$  mg/dL, 27.4%;  $P < 0.001$ ). Multivariate analysis revealed that hyperuricemia was a significantly independent risk factor for left ventricular hypertrophy in postmenopausal women [OR(95%CI): 1.367(1.026,1.821)], but not in premenopausal women [OR(95%CI): 1.290(0.669,2.486)].

**CONCLUSIONS** These findings suggested that hyperuricemia can be used as a risk marker of left ventricular hypertrophy in a female population, and particular as an independent risk factor in postmenopausal women but not in premenopausal women.

#### GW26-e3870

##### Gender-Related Differences in the Relationship between Plasma Homocysteine levels and lifestyle factors in rural Chinese population

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**OBJECTIVES** Increased plasma total homocysteine (tHcy) is a known cardiovascular disease (CVD) risk factor. Observational studies have supported the role of lifestyle factors such as physical activity, diet and alcohol consumption in CVD prevention. The prevalence of hyperhomocysteinemia (Hhcy) and the relationship between Hhcy and lifestyle factors have been reported in other ethnics. However, information available on rural Chinese population is scanty. Our present study aims to determine the gender-related differences in the relationship between Hhcy and lifestyle factors in rural Chinese population.

**METHODS** In this cross-sectional study, a total of 7135 adults (3320 men and 3815 women) aged 35 years or older were recruited from rural areas of China. Anthropometric measurements, laboratory examinations and self-reported information on lifestyle factors, such as physical activities, sleep duration, current smoking and drinking status, dietary habits and familial factors were collected by trained personnel.

**RESULTS** Plasma Hcy was higher in men than in women and greater in the elderly than in other age groups. In men, persons with Hhcy were more likely to be current smokers [odds ratio (OR): 1.328; 95% confidence interval (CI): 1.143-1.543] and to have an education of primary school or below (OR: 1.251; 95% CI: 1.068-1.465) and less likely to eat more vegetables (OR: 0.927; 95% CI: 0.863-0.996) than the normal-tHcy participants. In women, persons with Hhcy were more likely to be current smokers (OR: 1.465; 95% CI: 1.214-1.767), to sleep longer ( $> 9$ h/d) (OR: 1.677; 95% CI: 1.292-2.177), to have low physical activity (OR: 1.721; 95% CI: 1.197-2.475) and increased diet score (OR: 1.126; 95% CI: 1.007-1.259) and less likely to be current drinkers (OR: 0.488; 95% CI: 0.297-0.802) than the normal-tHcy participants.

**CONCLUSIONS** Our study revealed that substantial gender and age variations occur in plasma tHcy levels and prevalence of Hhcy in a large rural Chinese population, and were considerably higher than those found in other countries. Physical activity and current drinking status were not significantly associated with Hhcy in male, but