cellular response to insulin, VSMCs from WKY and SHR were isolated and cultured, and its proteome were comparatively analysed with normal control by 2-DE. Results showed that the proliferation of VSMCs from SHR be more sensitive to insulin stimulation than that VSMCs from WKY. The detectable spots ranged from 537 to 608 on the gels in VSMCs of SHR, and 413±31 spots in VSMCs of WKY. The different expressed protein spots in VSMCs of SHR were then isolated and measured by MALDI-TOF-MS. A total of 18 spots showed a sharp clear spectrum, and 13 spots matched with the known proteins from database. These proteins were mainly involved in cytoskeleton, glycometabolism and post-translational processes. Among these proteins, OPN and matrix gla protein were up-regulated expression proteins, whiled α-SM actin was down-regulated. Furthermore, these preliminarily identified proteins confirmed by RT-PCR and western blotting analysis were coincident with the changes in 2-DE check. In addition, the cytoskeleton changes and migration rate of VSMCs from SHR treated by insulin increased significantly. The results showed that insulin plays a crucial role in activating proliferation and migration of VSMCs, by regulating the phenotype switch of VSMCs.

### e0309 THE COMPARISON STUDY OF CORONARY ARTERY LESION IN TYPE 2 DIABETIC PATIENTS WITH CORONARY HEART DISEASE BETWEEN UYGUR AND HAN NATIONALITY

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**Objective** To study the characteristics of coronary artery lesion between Uygur and Han nationality type 2 diabetic patients with coronary heart disease.
**Methods** 648 patients were analysed retrospectively in our hospital. The coronary artery lesion was evaluated by the number, location and Gensini scores.
**Results** Compared with the Han patients, mean age in the Uygur patients was lower in same Gensini scores group ($p<0.05$). Along with the age increasing, Gensini scores increased gradually. Gensini scores of Uygur patients were significantly higher than those of Han patients in same age groups. The prevalence of three-vessel lesion was the highest in both Han (46.9%) and Uygur patients (45.9%). Severity of coronary artery disease increased with age, the prevalence of single-vessel lesion gradually reduced and the prevalence of three- vessel lesion gradually increased.
**Conclusions** Severity of coronary artery disease increased with age. Severity of coronary artery lesion in Uygur patients is significantly more serious than in Han patients at the same age. Compared with Han patients, the age of onset of similar degree coronary atherosclerosis in the Uygur patients is younger.

### e0310 ASYMMETRIC DIMETHYLARGININE AND CAROTID ATHEROSCLEROSIS IN TYPE 2 DIABETES MELLITUS

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**Objective** Circulating levels of asymmetric dimethylarginine (ADMA), an endogenous nitric oxide synthase inhibitor, are increased in diabetes mellitus (DM). This study was to assess the relationship between plasma ADMA level and carotid atherosclerosis in patients with type 2 DM.
**Methods** A total of 72 newly diagnosed and untreated type 2 DM individuals without manifest cardiovascular disease and 72 healthy controls were studied. Carotid atherosclerosis was determined by ultrasonographically evaluated intima-media thickness (IMT) and plaque score in all subjects. Plasma concentration of ADMA was measured by high-performance liquid chromatography.
**Results** Fasting blood glucose, haemoglobin A1c, insulin, triglyceride, and ADMA levels, and mean IMT, plaque score were higher in diabetic patients compared with the controls. Univariate and multivariate analyses demonstrated an independent association between ADMA and mean IMT in diabetic patients. On a multiple logistic regression analysis, ADMA was the sole predictor of carotid plaque formation (plaque score ≥1.1) (OR 2.43, 95% CI 1.19 to 4.94, $p<0.05$).
**Conclusion** Our results suggest that increased levels of ADMA are involved in the development of carotid atherosclerosis in type 2 DM.

## Epidemiology and Preventive Medicine: Obesity

### e0311 PREVALENCE OF CARDIOVASCULAR DISEASE BIOLOGICAL RISK FACTOR CLUSTERING AMONG OVERWEIGHT AND OBESE POPULATION IN BEIJING COMMUNITY—RESULTS FROM CCEIP

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**Objective** To investigate prevalence of CVD biological risk factor clustering among overweight and obese residents in Beijing community.
**Method** Cross-sectional data of 9786 subjects from CCEIP were obtained for analysis. Participants were divided into 3 groups (Normal, overweight and obese population) based on body mass index (BMI). Body examinations were done to record blood pressure. Overnight fasting plasma samples were drawn to determinate blood lipid and glucose levels.
**Results** 1) 10.5%, 22.5% and 37.9% subjects from normal, overweight and obese group had ≥2 biological CVD risk factors. (11.5%, 21.7%, 51.5% in men and 9.5%, 17.2%, 24.4% in women). The proportion of biological risk factor clustering patients elevated with the increase of BMI. Clustering hazard will increase by 21% when BMI increase every 1 unit. Clustering prevalence was higher in overweight and obese men than women (both $p<0.001$). 2) Prevalence of clustering increased with ageing in population. However, there was no significant difference among youth, middle aged and elderly obese male population (49.2%, 49.7% and 56.1%, $=2.52$ $p=0.285$). 3) The most common clinical symptoms complex of clustering was hypertension and dyslipidemia.
**Conclusion** The prevalence of CVD risk factor clustering was relatively high in overweight and obese population. Strengthen intervention should be taken in obese population, especially the young men, to prevent CVD events.

### e0312 EVALUATION ON THE DIAGNOSTIC VALUE OF BODY MASS INDEX IN PREDICTING OBSTRUCTIVE SLEEP APNEAHYPOPNEA SYNDROME IN CHINESE ADULTS

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**Objective** To evaluate diagnostic value of body mass index (BMI) in screening and diagnosing obstructive sleep apnoea-hypopnoea syndrome and to determine the reference standard of body mass index (BMI) in both male and female population by receiver operating characteristic (ROC) curve.