1.62, 95% CI 1.01 to 2.58) and BCA (OR, 2.39; 95% CI 1.79 to 3.18), with newly detected increased IMT of BCA (OR, 1.60; 95% CI 1.11 to 2.30), and with newly detected plaque of BCA (OR, 2.14; 95% CI 1.57 to 2.93).

Conclusions There were distinct associations between snoring and carotid atherosclerosis, which provides evidence for a relation between snoring and subclinical atherosclerosis.

**e0267 PREDICTION OF THE NEWLY-IDENTIFIED CAROTID PLAQUE WITH BLOOD LIPID LEVELS IN CHINESE ELDERLY POPULATION**

doi:10.1136/hrt.2010.208967.267

Wang Wei, Huo Ying, Zhao Dong, Lin Jing, Sun Jiayi, Wang Miao, Wu Yangfeng. Department of Epidemiology, Capital Medical University Affiliated Azihen Hospital, Institute of Beijing Heart, Lung and Blood Vessel Diseases, Beijing China

**Objective** To provide the changing prevalence of carotid plaque in a Chinese elderly population from 2002 to 2007 and accordingly evaluate the predictive effect of baseline lipid levels of interest on the newly-identified carotid plaque.

**Methods** All study subjects were recruited from two cohorts, viz. the People’s Republic of China/United States of America Collaborative Study (USA-PROC Study) and the Chinese Multi-provincial Cohort Study (CMCS). The baseline examination was taken in 2002 including CVD risk factors and B-mode ultrasound of carotid artery and the second examination was carried out in 2007. The carotid plaque was measured in a total of 2000 subjects aged 47–79 years (mean 65.3 years).

**Results** 1. During these 5 years, the prevalence of carotid plaque increased from 50.3% to 62.2% and from 21.5% to 51.5% for men and women, respectively. The newly-identified carotid plaque incidence reached 41.8% for men and 34.1% for women. 2. With the increase of baseline total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), triglyceride (TG, except for men), non-high-density lipoprotein cholesterol (non-HDL-C), and total high-density cholesterol ratio (TC/HDL-C) levels, the artery plaque incidence significantly increased in both sexes (p<0.05). 3. Crossstratification analysis of LDL-C, TG and HDL-C for carotid plaque incidence indicated the existence of joint effects between LDL-C and HDL-C, LDL and TG, as well as between TG and HDL-C, on the elevated carotid plaque. For example, at the normal levels of LDL-C and HDL-C, the plaque incidence was 23.3%, whereas the abnormal levels of these two lipids yielded an exceedingly high incidence of 49.0%. 4. In multifactorial analysis, higher LDL-C, non-HDL-C and TC/HDL-C were recognised as independent factors of carotid plaque incidence (RR=1.44, 95% CI 1.07 to 1.94; RR=1.45, 95% CI 1.08 to 1.96; RR=1.59, 95% CI 1.14 to 2.23 in men; RR=1.47, 95% CI 1.13 to 1.92; RR=1.35, 95% CI 1.04 to 1.75; RR=1.64, 95% CI 1.20 to 2.25 in women).

**Conclusions** The prevalence of carotid plaque increased rapidly in a Chinese elderly population. Elevated LDL-C, non-HDL-C and TC/HDL-C levels serve as predictor of carotid plaque incidence.
Low Testosterone Levels Are Inversely Associated with Carotid Artery Plaque Formation

Ma Qiang, Cheng Qingli, Wen Jing. Department of Geriatric Nephrology General Hospital of Chinese PLA

Objective To study the relationship between endogenous sex hormone levels and atherosclerosis of the carotid artery measured by ultrasonography.

Methods Analysis of the healthy elders from a population-based cohort study in 9 communities of Beijing. carotid intima-media thickness (IMT) and atherosclerotic plaques were determined ultrasonographically. Sex hormone levels were measured by immunoassay. The data were analysed with ANOVA and logistic regression analysis.

Results There was a inverse association between testosterone and plaque formation in females (p<0.001), whereas no association was found in males. Logistic regression analysis showed that females with a testosterone level in the lowest quintile (<0.49 nmol/l) were more likely (OR=3.11, p=0.002) to be in the plaque formation independent of age and the other risk factors. Age (OR=1.07 year-1), LDL (OR=1.65, p=0.027), physical exercise (OR=0.54, p=0.006), and IL-6 (OR=1.05, p=0.022) were also independently associated with plaque formation.

Conclusions Testosterone concentrations are negatively associated with carotid artery atherosclerosis in females, experimental and prospective studies are needed to determine the possible therapeutic role of testosterone in atherosclerosis.