A low ankle-to-brachial index (ABI) is a strong correlate of cardiovascular disease and subsequent mortality. The relationship between ABI and alcohol consumption remains unclear.

Methods and Results Data are from the Cardiovascular Risk Survey (CRS), a multi-ethnic community-based study of 14,593 Chinese people (5,749 Han, 4,747 Uighur, and 4,097 Hazakh) aged 35 years and over at baseline in June 2007 to March 2010. The relationship between alcohol intake and ABI was determined by use of analysis of covariance and multivariable regressions. In men, a linear correlation between alcohol intake and ABI was found by one-factor analysis of variance (p<0.001). After adjusted for the age, sex, ethnicity, blood pressure, body mass index, smoking, GLU, total cholesterol, HDL, and LDL, the J-shaped curve remains exist.

Conclusions Our results indicated that moderate drinking is a protective factor for carotid atherosclerosis. But the definition of moderate drinking should be difference in Han, Uighur and Hazakh population.

Aim The relationship between alcohol consumption and carotid atherosclerosis had been reported in some epidemiologic studies. But the results were conflicting in different researches. In the present study, we investigated the association between alcohol intake and carotid atherosclerosis in Chinese Han, Uighur, and Hazakh population.

Methods and Results The study population sample comprised 13,057 Chinese people (5,277 Han, 4,572 Uighur, and 3,183 Hazakh) aged 35 years and over, who participated a Cardiovascular Risk Survey between June 2007 and September 2009. Daily alcohol consumption was determined by the number and frequency of alcoholic beverages consumed. The carotid artery parameters including common carotid artery intima-media thickness (CCA-IMT) and carotid plaques were measured using high-resolution B-mode ultrasonography. In Han or Hazakh, carotid IMT as a function of alcohol consumption was depicted as a J-shaped curve with a nadir for the alcohol intake category of 20 to 29.9 g/d; In Uighur, the similar curve with a nadir of 30 to 49.9 g/d was observed. For the prevalence of carotid plaques, we also observed the similar curves in Han and Hazakh but not in Uighur. After adjusted for the age, sex, blood pressure, body mass index, smoking, GLU, total cholesterol, HDL, and LDL, the J-shaped curves remain exist.

Conclusions Our results indicated that moderate drinking is a protective factor for carotid atherosclerosis. But heavier drinking is a risk factor for peripheral arteriosclerosis.