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THE RELATIONSHIP BETWEEN CONSUMPTION OF VINEGAR AND THE RELEVANT FACTORS FOR CARDIOVASCULAR DISEASE

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Objectives The objective of the present study was to investigate the condition of vinegar consumption in taiyuan and assess the relationship between consumption of vinegar and cardiovascular disease.

Methods A total of 4913 residents (aged 35–75 years) who were from Yingze community and participated in physical examination were included. Data including stroke histories, hyperlipidemia histories, coronary heart disease histories and consumption of vinegar were collected by questionnaire, and blood pressure (BP), fasting blood glucose (FPG), cholesterol (CHOL), triglyceride (TG), HDL-cholesterol (HDL-C), LDL-cholesterol (LDL-C), waist/hip ratio (WHR) and body mass index (BMI) were measured. The subjects of research were classified into three groups by consumption of vinegar: little, moderate, abundant. And 1471 (29.9%) subjects consuming little vinegar, 1930 (39.3%) subjects consuming moderate vinegar, 1224 (24.9%) subjects consuming abundant vinegar.

Results By one-way ANOVA analysis, it showed that there was a decreasing tendency of plasma HDL-C level with the increasing consumption of vinegar, but the difference was not statistically significant among groups ($M \pm S$: g1, 1.3440; g2, 1.3437; g3, 1.3352; HLD, $p=0.725$). As for BMI and WHR, there were significant differences between groups (BMI, $p=0.001$; WHR, $p=0.007$), but the tendency was not obvious ($M \pm S$: BMI, g1, 25.3966 mmol/l; g2, 25.0997 mmol/l; g3, 25.5545 mmol/l; $M \pm S$: WHR, g1, 0.8816; g2, 0.8795; g3, 0.8870). Binary logistic regression analysis showed that the relevant factors for cardiovascular disease were age, degree of education, smoking histories, alcohol consumption. The analysis of covariance showed that the consumption of vinegar was still related with BMI ($p=0.001$) and WHR ($p=0.036$).

Conclusions This research showed that the correlation between the consumption of vinegar and plasma HDL is slight; the people who consume vinegar moderately tend to have a better state of health than those who consume little vinegar or in great quantity.