RED BLOOD CELL FOLATE CONCENTRATIONS AND CORONARY HEART DISEASE PREVALENCE: A CROSS-SECTIONAL STUDY BASED ON 1999-2012 NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY

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Statement of the Problem: Folate is involved in a number of metabolic pathways. Red blood cell (RBC) folate is a well-established indicator of folate intake. However, studies focused on the association between RBC folate and coronary heart disease (CHD) are limited. e aim of the current study is to investigate the e ect of RBC folate concentrations on the presence of CHD in a nationally representative sample of American adults.

Methodology & eoretical Orientation: We included 22499 participants of 1999-2012 National Health and Nutrition Examination Survey (NHANES) aged 30 to 74 years with RBC folate concentrations, CHD status and responses to co-variate questions. e status of CHD was self-reported. Bio-Rad Quanta Phase II radioassay and microbiological assay were used to measure RBC folate concentrations. Firstly, we treated RBC folate as a categorical variable, based on RBC folate tertiles, a used logistic regression analysis to display the RBC folate and CHD relationship. Secondly, we explored associations using combination of restricted cubic spline and logistic regression models, strati ed by sex.

Findings: 822 participants were self-reported CHD, with a prevalence of 3.65%. A er adjusting for several well-established traditional CHD risk factors, RBC folate was positively related to CHD presence in the total population and the association was more pronounced among males than females. A J-shaped pattern was observed in RBC folate concentrations for female

Conclusion & Signi cance: Elevated RBC folate concentrations were associated with higher CHD risk. Further investigation is needed to test the association in large-scale follow-up studies.

Biography

Yang Peng is currently a PhD student in the University of Queensland. He is now involved in evaluation the cardiovascular health, using seven American Health

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