Supplementary Material

2 Methods

2.1 Study population and data collection

The inclusion criteria for CAD patients in this case-control study were as follows: (1) a documented history of myocardial infarction; (2) previous intervention for coronary revascularization, either through coronary artery bypass graft surgery or percutaneous coronary intervention; (3) the identification of $\geqslant$ 50% stenosis in one or more coronary arteries during cardiac catheterization; (4) no prior diagnosis of malignancy; (5) no end-stage renal disease; and (6) no recent blood transfusion within the past month or previous bone marrow transplantation. We followed the method reported by Schlesselman *et al.*[1] to estimate sample size and found that at least 286 people were needed for each group. According to the eligibility criteria and the required sample size estimated by statistical hypothesis, a total of 404 eligible CAD patients were eventually included in this study. Among them, 314 were successfully interviewed and donated biological specimens with a participation rate of 78.5% during the study period. To select matched controls, we used a structured questionnaire to identify disease-free controls and to exclude subjects who were suspected of having any form of cardiovascular disease. On the basis of structured questionnaire, 314 healthy controls were recruited from individuals who visited the Affiliated Wuxi People's Hospital of Nanjing Medical University for physical examination, during the same time period as the case enrollment. The controls were frequency-matched to the cases on age ($\pm$ 3 year), and gender. All participants lived in Wuxi City for more than 10 years.

References

1. J. J. Schlesselman, Sample size requirements in cohort and case-control studies of disease, Am J Epidemiol, 1974, 99, 381-384.

Table 1S OR (95% CIs) of CAD, by tertiles of each fatty acid

Erythrocyte fatty acids	Tertiles of Erythrocyte Fats			P-Trend	Continuous
	T_1	T_2	T_3		
C14:0				0.300	1.17 (0.85, 1.61)
Median (%)	0.28	0.93	1.45		
Controls/Cases	103/106	115/94	96/114		
Adjusted OR (95% CI)	1	0.78 (0.52, 1.18)	1.25 (0.83, 1.89)		
C20:3 n-6				0.024	1.48 (0.82, 2.67)
Median (%)	1.15	1.38	1.67		
Controls/Cases	108/102	119/89	87/123		
Adjusted OR (95% CI)	1	0.77 (0.51, 1.17)	1.60 (1.00, 2.41)		
C22:4 n-6				0.200	0.91 (0.71, 1.17)
Median (%)	2.08	2.81	3.41		
Controls/Cases	103/107	95/113	116/94		
Adjusted OR (95% CI)	1	1.11 (0.73, 1.67)	0.75 (0.49, 1.12)		
C22:5 n-6				0.700	1.15 (0.46, 2.90)
Median (%)	0.56	0.75	0.92		
Controls/Cases	108/102	108/100	98/112		
Adjusted OR (95% CI)	1	1.01 (0.67, 1.51)	1.09 (0.72, 1.63)		
C18:3 n-3				0.049	0.11 (0.03, 0.38)
Median (%)	0.39	0.47	0.60		
Controls/Cases	102/108	92/118	120/88		
Adjusted OR (95% CI)	1	1.14 (0.76, 1.72)	0.66 (0.44, 1.00)		
Total TFAs				0.400	1.18 (1.00, 1.40)
Median (%)	0.34	0.42	0.56		
Controls/Cases	106/104	112/96	94/114		
Adjusted OR (95% CI)	1	0.80 (0.53, 1.20)	1.22 (0.81, 1.83)		
C18:1 n-9t				0.800	1.04 (0.87, 1.23)
Median (%)	0.21	0.27	0.36		
Controls/Cases	102/107	112/98	100/109		
Adjusted OR (95% CI)	1	0.79 (0.52, 1.20)	1.06 (0.70, 1.60)		
C18:2 n-6t				0.110	1.29 (1.09, 1.54)
Median (%)	0.12	0.16	0.20		
Controls/Cases	114/95	101/108	99/111		

| Adjusted OR (95% CI) | 1 | 1.34 (0.89, 2.03) | 1.40 (0.93, 2.11) |

- TFA: Trans fatty acid, n-3: n-3 PUFA, n-6: n-6 PUFA.

- OR (95%CI) for the logistic regression model adjusted for age, BMI, sex, ethnic group, residence, education level, marital status, diabetes, hypertension, dyslipidemia, History of hypertension, history of diabetes, history of CAD, history of stroke, smoking status, and alcohol consumption.

- P-Trend values were obtained from logistic regression by treating median value of each tertile of fatty acids as continuous variables. CAD, coronary artery disease.