

Title	The apparent inverse association between dietary carotene intake and risk of cardiovascular mortality disappeared after adjustment for other cardioprotective dietary intakes: The Japan collaborative cohort study
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Osaka University

論文内容の要旨

Synopsis of Thesis

氏名 Name	高 琪
論文題名 Title	The apparent inverse association between dietary carotene intake and risk of cardiovascular mortality disappeared after adjustment for other cardioprotective dietary intakes: The Japan collaborative cohort study (カロテンの摂取とCVD疾患死亡リスクとの関連:JACC研究)
<p>論文内容の要旨</p> <p>〔目的(Purpose)〕 An effect of dietary carotenes on risk of cardiovascular disease (CVD) is uncertain. We aimed to investigate whether the association between dietary carotenes intake and risk of CVD mortality will persist after controlling for the intakes of potential cardioprotective dietary factors that correlate with dietary alpha- and/or beta-carotenes.</p> <p>〔方法ならびに成績(Methods/Results)〕 We followed up a total of 58,646 Japanese between 1988-1990 and 2009. We used a food frequency questionnaire to determine the dietary intakes of carotenes, and estimated the hazard ratios (HRs) and 95% confidence intervals (CIs) of CVD mortality in relation to carotene intake by the proportional hazard regression developed by David Cox. During 965,970 person-years of follow-up (median 19.3 years), we identified 3,388 total CVD deaths. After adjusting for demographic and lifestyle factors, dietary intakes of alpha-carotene were significantly associated with the reduced risk of mortality from coronary heart disease (CHD); adjusted HR (95% CI) in the highest versus lowest quintiles of intake was 0.75 (0.58-0.96; P-trend=0.02) and dietary intakes of beta-carotene were significantly associated with the reduced risk of mortality from CVD, CHD, and other CVD; adjusted HRs (95% CIs) were 0.88 (0.79-0.98; P-trend = 0.04), 0.78 (0.61-0.99; P-trend = 0.01), and 0.81 (0.67-0.98; P-trend=0.04), respectively. However, after further adjusting for the dietary intakes of potassium, calcium, vitamin C, vitamin E or vitamin K, these associations disappeared.</p> <p>〔総括(Conclusion)〕 Dietary alpha- and beta-carotenes intakes were not associated with risk of CVD mortality after controlling for intakes of other potential cardioprotective nutrients.</p>	

論文審査の結果の要旨及び担当者

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論文審査の結果の要旨	
<p>This study aims to investigate the association between dietary intakes of alpha- and beta-carotenes and mortality from CVD in a large prospective study of Japanese men and women. Furthermore, we want to check different adjustment model and the affect on carotenes nutritional factors. Current research followed up a total of 58,646 Japanese population. We observed that all inverse association between dietary carotene intake and risk of cardiovascular mortality disappeared after adjustment for other cardioprotective dietary intakes such as vitamin C, vitamin K, vitamin E, potassium, magnesium, calcium or fiber. Therefore, the apparent association between carotene and CVD might be attributed to other cardioprotective factors in the same food sources of carotene. Unlike the previous studies, this research adjusted for a wide range of nutritional variables that appeared to be responsible for the apparent associations between dietary carotene and risk of CVD mortality. This research is worth to be granted a doctoral degree (medicine).</p>	