GW25-e3516
Resveratrol supplementation was not beneficial to the anti-inflammatory effects and metabolic modulation in the prevention of cardiovascular disease and stable coronary artery disease: A meta-analysis

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Objectives: To explore the effects of resveratrol on the anti-inflammatory and metabolic modulation in the prevention of cardiovascular disease and stable coronary artery disease.

Methods: A systematic literature search was conducted to identify randomised controlled trials of resveratrol in PubMed. Reports of trials were sought that evaluated the effects of resveratrol in patients with cardiovascular disease risk factors and stable coronary artery disease. Then according to the Cochrane Handbook for systematic reviews, we estimate the quality of the randomised controlled trials and collect the useful information. At last, we choose the variable and process data with RevMan 5.0.

Results: 12 trials with data for 455 patients were identified by the literature search. Resveratrol did not significantly decrease the CRP (weighted mean difference (WMD) -0.12mg/L, 95% CI -0.36 to 0.12, P>0.05), TNF-α (WMD -0.09pg/ml, 95% CI -0.53-0.35, P>0.05), and IL-6 (WMD 0.01pg/ml, 95% CI -0.23-0.24, P>0.05) in patients compared with placebo. But resveratrol could decrease IL-1β in the pool analysis of 2 clinical trials with WMD -0.17pg/ml, 95% CI -0.27-0.08, P<0.005. The resveratrol supplementation brought some benefits on glycemic control, which performed the ability of reducing the HbA1c (WMD -0.08%, 95% CI 0.04-0.12, P<0.05), however it was a pity that resveratrol could not improve the fasting glucose (WMD 0.03mmol/L, 95% CI from 0.04 to 0.10, P>0.05), even increased homocysteine model of assessment of insulin resistance (WMD 0.08, 95% CI 0.77-0.98, P>0.05) and in patients with high cardiovascular risk but without diabetes compared with placebo. At the same time, the supplementation of resveratrol did not exert the significant effect on the secretion of leptin (WMD -0.49mg/L, 95% CI -1.49-1.97, P>0.05) and adiponectin (WMD 0.13ug/ml, 95% CI -0.23 to 0.48, P>0.05).

Conclusions: According to the existing evidences, resveratrol supplementation did not bring benefits on the metabolic modulation and anti-inflammatory effects. Then because of the number of clinical trials and the samples of these reports were small, we need more large and multicenter to clarify the effects of resveratrol on cardiovascular protection.

GW25-e1719
Plasma homocysteine levels in patients with subclinical hypothyroidism: A meta-analysis

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Objectives: Hyperhomocysteinemia is a well known risk factor for cardiovascular disease. However, although increased plasma homocysteine levels have been widely documented in patients with subclinical hypothyroidism (SCH) patients remains controversial: a few of studies have shown that tHcy level is elevated in SCH, while the others are conflicting. The aim of this meta-analysis is to review the current data available in an effort to determine the association between SCH and hyperhomocysteinemia, as well as associations between SCH and various metabolic/cardiovascular risk factors.

Methods: We searched PUBMED, EMBASE and COCHRANE LIBRARY databases prior to September 2013 to identify studies that reported plasma homocysteine levels in patients with SCH compared with euthyroid subjects. Two reviewers independently evaluated every potential study for eligibility, assessed the methodological quality, extracted the data. Most of the included articles are observational studies, so we conducted and reported this analysis according to the guidelines of the Meta-analysis of Observational Studies in Epidemiology Group. We extracted the mean level as well as the standard deviation of tHcy in SCH and euthyroid subjects from each study. All the meta-analysis in this study was performed by using STATA 12.0 (Stata, College Station, Texas, 77845 USA). The weighted mean difference (WMD) and 95% CIs of tHcy, folate and vitamin B12, as well as some metabolic parameters such as BMI, PGG, TG, HDL, LDL-C, were calculated in each study.

Results: We finally included nine studies with 443 patients and 367 controls from 33 articles in this meta-analysis. The pooled result of the weighted mean difference (WMD) of increased tHcy was 0.96 (95% CI 0.14-1.78; P=0.02). And the analysis of metabolic parameters showed that SCH was associated with a significant increase of body mass index (WMD, 1.33, 95% CI 0.62-2.04; P<0.01), systolic blood pressure (WMD, 10.89mmHg, 95% CI 6.55, 15.23; P<0.01), diastolic blood pressure (WMD, 7.20mmHg, 95% CI 5.02-9.37; P<0.01), triglyceride levels (WMD, 0.32 mmol/L, 95% CI 0.19-0.64, P<0.01), total cholesterol levels (WMD, 0.55 mmol/L, 95% CI 0.36, 0.71, P<0.01), and low-density lipoprotein levels (WMD, 0.28 mmol/L, 95% CI 0.14-0.42, P<0.01). Though the analysis of folate showed lack of statistical difference, there was a decrease tendency in SCH patients (WMD, -0.55mg/ml, 95% CI -1.10-0.00; P=0.051). Other parameters such as HDL (WMD,-0.45 mg/dl, 95% CI -1.09-0.02, P=0.178), WBC (WMD, -0.19, 95% CI -2.39-2.03, P=0.723), there are no significant differences between the two groups. While for vitamin B6, we could not perform an analysis since the enrolled studies did not provide sufficient data to calculate the 95% CI of vitamin B6 levels. As the data provide in each study is insufficient, we could not analyze the associations between homocysteine and the other metabolic parameters.

Conclusions: Our analysis of nine observational studies with 443 patients showed that SCH is associated with an increased plasma homocysteine levels. As for other traditional risk factors for CVD, SCH is associated with a significant increase in BMI, SBP, DBP, TC and LDL-C. And given to the higher risk of coronary artery disease, all these findings emphasize the necessity of earlier screening and treating of SCH.

GW25-e1399
Correlation of CYP2C9 gene polymorphism and coronary heart disease in Yunnan Han population

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Objectives: Cytochrome P450 (CYP) 2C9 gene polymorphism and coronary heart disease in Yunnan Han population correlation.

Methods: Randomly selected from September 2012 to December 2013 at the First Affiliated Hospital of Kunming Medical College of Cardiology hospital and unrelated group cases of observation study 127 patients, among whom 63 patients with coronary artery disease and 64 patients in the control group. The correlation of CYP2C9 gene polymorphism and coronary heart disease in Yunnan Han population.

Results: The frequency of Yunnan Han population for CYP2C19*1, CYP2C19*2 and CYP2C19*3 3 alleles frequency was 66.9%, 28.4% and 4.7%; Of CYP2C9 metabolic phenotype (extensive metabolizers) by the basis of metabolic phenotype definition and the result of genotype. Group of 63 patients with coronary artery disease and 64 patients in the control group to analyze the genetic polymorphism, analyze the correlation of gene polymorphism and coronary heart disease.

Conclusions: CYP2C9 gene polymorphism is given priority to with wild type in Yunnan Han population, CYP2C9*/1, CYP2C9*/2 and CYP2C9*/3 3 alleles frequency of occurrence was 66.9%, 28.4% and 4.7%;CYP2C9 metabolic phenotype definition intermediate metabolizers highest frequency (47.2%), followed by extensive metabolisers (43.3%), poor metabolizers (9.5%) the lowest; CYP2C9*/1*1, CYP2C9*/1*2, CYP2C9*/1*3, CYP2C9*/2*2, CYP2C9*/2*3 and CYP2C9*/3*3 genotype frequency was 43.3%, 42.5%, 4.7%, 5.5%, 3.2% and 0.8%; Two groups of CYP2C9 genotype distribution accords with Hardy Weinberg equilibrium; CYP2C9*/1, CYP2C9*/2, CYP2C9*/3 allele in CHD group were 56.3%, 37.3%, 6.4%, in the control group were 77.3%, 19.5%, 3.2%. Allele frequency distribution between the two groups was statistically difference (P<0.05); Logistic regression analysis in addition to traditional CVD risk factors have been corrected, which high cholesterol, etc., CYP2C9*/1*2 gene mutation significantly increased risk of coronary heart disease (OR=5.24, 95% CI 2.00-13.72), CYP2C9*/3*3 gene mutation was also significantly increased the risk (OR=4.54, 95% CI 0.55-37.08). CYP2C9 gene polymorphism may increase the risk of coronary heart disease in Yunnan Han population.