

2.4 CARDIOVASCULAR AND DIABETES

Chair: Dr Maria Ines Schmidt, Brazil

02-4.1 LONG TERM CARDIOVASCULAR RISK IN WOMEN WITH PRE-ECLAMPSIA: SYSTEMATIC REVIEW AND META-ANALYSIS

doi:10.1136/jech.2011.142976a.64

¹M Brown, ¹K Best, ¹R Bell, ¹M Pearce, ²S Robson, ³J Waugh. ¹Institute of Health & Society, Newcastle University, Newcastle, UK; ²Institute of Cellular Medicine, Newcastle University, Newcastle, UK; ³Directorate of Women's Services, Newcastle upon Tyne NHS Foundation Trust, Newcastle, UK

Introduction There is increasing evidence that pre-eclampsia, a principal cause of maternal morbidity, may also be a risk factor for future cardiovascular and cerebrovascular events. This review aimed to assess the current evidence and quantify the risks of cardiovascular and cerebrovascular events that may follow a diagnosis of pre-eclampsia.

Methods MEDLINE and EMBASE were searched with no language restrictions, as were core journals and reference lists from reviews. Case control and cohort studies which reported cardiovascular and cerebrovascular diseases diagnosed more than 6 weeks postpartum, in women who had history of pre-eclampsia relative to women who had unaffected pregnancies, were included.

Results 24 articles were included in the systematic review and 19 in the meta-analysis. Women with a history of pre-eclampsia or eclampsia were at significantly increased odds of fatal or non-fatal cardiovascular disease (OR 2.27, 95% CI 1.83 to 2.82) and cerebrovascular disease (OR 2.46, 95% CI 1.57 to 3.85). Among pre-eclamptic women, pre-term delivery was not associated with an increased risk of a future cardiovascular event (RR 1.28, 95% CI 0.82 to 1.99).

Conclusion Women diagnosed with pre-eclampsia are at increased risk of future cardiovascular or cerebrovascular events, with an estimated doubling of risk compared to unaffected women. This has implications for the follow-up of all women who experience pre-eclampsia, not just those who deliver pre-term. This association may reflect shared common risk factors for both pre-eclampsia and cardiovascular and cerebrovascular disease.

02-4.2 IS THE IMPACT OF HEALTH LIFESTYLE BEHAVIOURS ON CARDIOVASCULAR MORTALITY MODIFIED BY PARENTAL HISTORY OF CARDIOVASCULAR DISEASE?

doi:10.1136/jech.2011.142976a.65

¹E Eguchi, ¹H Iso, ²Y Wada, ³S Kikuchi, ⁴Y Watanabe, ³A Tamakoshi. ¹Osaka University, Osaka, Japan; ²Kochi Women's University, Kochi, Japan; ³Aichi Medical University, Aichi, Japan; ⁴Kyoto Prefectural University of Medicine, Kyoto, Japan

Introduction We examined whether the association between lifestyle behaviours and cardiovascular disease mortality is modified by parental history of CVD.

Methods The survey cohort was a total of 52 606 subjects (22 278 men and 30 328 women) aged 40–79 years from 1988 to 1990 were followed-up until the end of 2006. Paternal, maternal, both of parental, and either/both of parental histories of heart disease and/or stroke were defined as parental histories of CVD. We used the healthy lifestyle score (fruits ≥ 1 /day, fish ≥ 1 /day, milk almost every day, exercise ≥ 5 h/w and/or walking > 0.5 h/day, BMI 21–25 kg/m², Ethanol intake < 46.0 g/day, non-smoker, and sleep 5.5–7.5 h/day, ranged 0–8) to evaluate the lifestyle status.

Results During the 14.2 median years of follow-up, there were 3284 deaths from total CVD (1706 men and 1578 women). Compared

with people without parental history of CVD, those with it showed 9%–25% increased risk of mortality from CVD. However, the association between lifestyle behaviours and the mortality from CVD did not vary materially by parental history of CVD. The respective multivariable HRs (95% CI) in highest lifestyle score category compared to lowest were 0.55 (0.45 to 0.68) for either/both of parental histories of CVD and 0.50 (0.39 to 0.64) for those without it in men, and 0.65 (0.54 to 0.79) and 0.63 (0.49 to 0.81) in women.

Conclusions Lifestyle modifications may be important for both people with or without parental histories.

02-4.3 EDUCATION AND CORONARY HEART DISEASE RISK: POTENTIAL CONTRIBUTIONS OF HEALTH LITERACY, TIME PREFERENCE AND SELF-EFFICACY

doi:10.1136/jech.2011.142976a.66

¹E Loucks, ²S Gilman, ²I Kawachi, ²L Kubzansky, ³L Martin, ¹M Rogers, ¹A Wilhelm, ^{1,2}S Buka. ¹Brown University, Providence, Rhode Island, USA; ²Harvard University, Boston, Massachusetts, USA; ³Rand Corporation, Washington, DC, USA

Introduction Education is inversely associated with risk for coronary heart disease (CHD), however the contributions of potential explanatory mechanisms including health literacy, time preference and self-efficacy are poorly understood. Objectives were to evaluate whether infrequently measured covariates (health literacy, time preference, self-efficacy) are important explanatory mechanisms for associations between education and CHD risk.

Methods The study sample included 416 participants, aged 38–47 years (59.5% female), of the New England Family Study birth cohort. Ten-year CHD risk was calculated using the validated Framingham risk algorithm incorporating diabetes, smoking, blood pressure, total cholesterol, HDL cholesterol, age and sex. Multi-variable regression analyses were performed.

Results Regression analyses adjusting for age, sex and race/ethnicity demonstrated that $>$ college (ie, additional schooling past 4-year college degree) was associated with $b = -68.9\%$ ($p < 0.001$) lower 10-year CHD risk compared with $<$ high school. Further addition of early life potential confounders (childhood socioeconomic position, childhood intelligence and childhood chronic illness) resulted in $b = -64.9\%$ lower 10-year CHD risk for those with $>$ college vs $<$ high school. Finally, addition of health literacy, time preference and self-efficacy to models resulted in $b = -74.5\%$ ($p < 0.0001$) lower CHD risk for $>$ college vs $<$ high school. Dose-response associations between education and CHD risk were found for $<$ high school, high school, some college, college degree and $>$ college.

Conclusion This study found that education was inversely associated with CHD risk after accounting for traditional and early-life confounders; further addition of novel potential explanatory mechanisms including time preference, health literacy and self-efficacy had minimal impact on effect size.

02-4.4 LOWER RESPIRATORY TRACT INFECTION IN EARLY LIFE IS ASSOCIATED WITH WORSE LUNG FUNCTION IN ADULT LIFE: PROSPECTIVE RESULTS FROM THE BARRY CAERPHILLY GROWTH (BCG) STUDY

doi:10.1136/jech.2011.142976a.67

¹J L Bernal, ²M Upton, ¹J Henderson, ³A McCarthy, ^{1,4}G Davey Smith, ¹Y Ben-Shlomo. ¹School of Social and Community Medicine, University of Bristol, Bristol, UK; ²Woodlands Family Medical Centre, Cleveland, UK; ³Child Health Epidemiology