

108 FUTURE CARDIOVASCULAR DISEASE RISK FOR WOMEN WITH A HISTORY OF GESTATIONAL HYPERTENSION: A SYSTEMATIC REVIEW AND META-ANALYSIS

¹Clare Oliver-Williams*, ²Charmaine Lo, ¹Andre Lo, ¹Shu Hui, ³Grace Fisher, ¹Beth Corker, ¹Olivia Batho, ¹Bethan Morris, ¹Monika Chowaniec, ⁴Abigail Fraser. ¹University of Cambridge; ²University of Newcastle Australia; ³Swavesey College; ⁴University of Bristol

10.1136/heartjnl-2019-BCS.105

Introduction The risk of cardiovascular outcomes associated with gestational hypertension is unclear. This study aimed to quantify the association between gestational hypertension and cardiovascular outcomes for women.

Design Systematic review and meta-analysis.

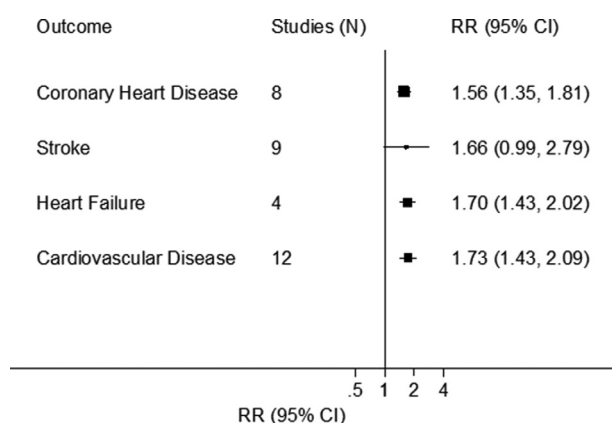
Data Sources

PubMed, Embase and Web of Science.

Eligibility Criteria

Studies examining the association between gestational hypertension and any cardiovascular outcome, including cardiovascular disease, coronary heart disease, stroke and heart failure. Two reviewers independently assessed the abstracts and full-text articles. Study characteristics and the relative risk of cardiovascular outcomes associated with gestational hypertension were extracted from eligible studies. Where appropriate, estimates were pooled with inverse variance weighted random-effects meta-analysis, and the absolute risk increases were calculated using the European population as a reference, as the majority of studies came from Europe.

Results Nineteen studies involving 3,601,192 women (128,445 with gestational hypertension) were identified. A history of one or more pregnancies affected by gestational hypertension was associated with an increased risk of cardiovascular disease (12 studies, relative risk 1.73, 95% confidence interval: 1.43–2.08), coronary heart disease (8 studies, 1.56, 1.35–1.81) and heart failure (4 studies, 1.70, 1.43–2.02). (See Figure) There was also evidence for an increased risk of stroke (9 studies, 1.66, 0.99–2.80). Among the



Abstract 108 Figure 1 Association between gestational hypertension and cardiovascular outcomes, showing summary relative risks for each outcome examined

outcomes examined, the highest absolute risk increase was for cardiovascular disease: 14.0 events/1000 person-years. Associations between gestational hypertension and cardiovascular disease were broadly consistent across subgroups, although there was evidence that high quality studies with a low risk of bias had lower effect estimates. When analyses were restricted to high quality studies, an increased risk was found for all outcomes: cardiovascular disease, (1.53, 1.25–1.88); coronary heart disease, (1.40, 1.26–1.54); stroke, (1.35, 1.14–1.60); and heart failure, (1.70, 1.43–2.02).

Conclusion Gestational hypertension is associated with an increased risk of overall cardiovascular disease, coronary heart disease, stroke and heart failure. Only two studies evaluated risk associated with the number of pregnancies affected by gestational hypertension, therefore more research is needed to assess the presence of a dose-response relationship.

Conflict of Interest None

109 ESC RISK SCORE-ADJUSTED COST ANALYSIS OF THE INVESTIGATIONS IN STABLE CHEST PAIN: NICE VS. ESC GUIDELINES

¹Alexandros Papachristidis*, ²Sarah Denny, ³George Vaughan, ¹Tamim Akbari, ²Edith Avornyo, ¹Tracey Griffiths, ¹Emma Saunders, ¹Jonathan Byrne, ¹Mark Monaghan, ³Khaled Alfakih. ¹King's College Hospital; ²Lewisham and Greenwich NHS Foundation Trust; ³King's College London

10.1136/heartjnl-2019-BCS.106

Introduction National Institute for Health and Clinical Excellence (NICE) have removed the use of pre-test probability risk score (RS) in patients with new onset stable chest pain. They recommend computed tomography coronary angiography (CTCA) as first line investigation irrespective of RS. European Society of Cardiology (ESC) suggest using the ESC RS and recommend functional tests as initial investigation in patients with RS 15–85% and allow for the use of CTCA in patients with RS of 15–50%. We compare the two recommended strategies (NICE vs ESC) as applied in two neighbouring NHS Trusts in South London. We additionally investigate the prognostic role of ESC RS in terms of need for revascularization.

Methods Two groups of patients, who attended rapid access chest pain clinics in two neighbouring NHS Trusts were recruited. Group A (N = 667) were investigated based on ESC guidelines, whereas Group B (N = 654) were investigated following NICE guidance. The RS was calculated as per ESC recommendation based on patient age, gender and typicality of chest pain. The patients were divided in two subgroups according to ESC RS. Sub-groups A1 and B1, were of patients with lower RS (15–50%) and sub-groups A2 and B2 were of patients with higher RS (>50%). The need for invasive coronary angiography (ICA) and revascularization were compared between groups and sub-groups. A cost analysis was performed based on UK tariffs for CTCA (£220), stress echo (£176) and ICA (£1,001).