Background & Aims

- Previous studies suggest that hypertensive disease during pregnancy (HDP) increase the risk of long-term cardiovascular disease later in life, and clinical guidelines recommend including HDP as important female specific factor in risk assessment.
- However, it has not been issued whether genetic trait for HDP determines the development of subsequent cardiovascular disease.
- In the current study, we developed polygenic risk scores for HDP (HDP-PRS) from genome-wide associated study (GWAS) data and evaluated its impact on long-term cardiovascular outcome.

Methods

- From the UK biobank, we included unrelated Caucasian women with at least one live birth and available genetic data.
- HDP-PRS was calculated by LDpred using the summary statistics from FinnGen, another large-scale biobank.
- Subjects were divided according to the genetic risk categorized by HDP-PRS and were evaluated for incident cardiovascular disease.

Conclusion

- This study provides evidence on the informative value of HDP-PRS in the prediction of long-term cardiovascular outcomes later in life.
- The application of PRS information for risk assessment and medical interventions needs to be evaluated in further studies.