Prevalence-based recommendation for long-term cardiovascular follow-up after preeclampsia

Emma **Janssen** [1,*], Mieke **Hooijschuur** [1], Eva G. **Mulder** [1], Veronique M. M. M. **Schiffer** [1], Robert-Jan **Alers** [1], Laura M. **Jorissen** [1], Gwyneth E. **Jansen** [1], Abraham A. **Kroon** [2], Arnoud W. J. **van't Hof** [3], Jasper J. **Brugts** [4], Chahinda **Ghossein-Doha** [4], Marc E. A. **Spaanderman** [1]

[1] Department of Obstetrics and Gynaecology, Maastricht University Medical Centre+, Maastricht, The Netherlands.
[2] Department of Internal Medicine, Maastricht University Medical Centre+, Maastricht, The Netherlands.
[3] Department of Cardiology, Maastricht University Medical Centre+, Maastricht, The Netherlands.
[4] Department of Cardiology, Thorax Centre, Erasmus Medical Centre, Rotterdam, The Netherlands.

DOI: 10.36129/jog.2024.S82

Objective. Despite increased cardiovascular (CV) disease risks after preeclampsia, international guidelines remain indefinite on the timing and frequency of CV risk assessment in these women. To provide prevalence-based recommendations on systematic follow-up after preeclampsia, we evaluated the age-related prevalence of traditional CV risk factors in former preeclamptic women compared to women with a history of normotensive gestation.

Materials and Methods. We used cross-sectional cohort data of women with a history of preeclampsia and a control group of women with a history of normotensive pregnancy up to thirty years postpartum. We assessed measures of cardiovascular risk constituents at different age intervals including the prevalence of hypertension, diabetes mellitus, hypercholesterolemia, obesity, insulin resistance, chronic kidney disease and albuminuria.

Results. We included 1,040 women after preeclampsia and 518 controls. Higher development rates of CV risk factors were observed after preeclampsia as compared to normotensive gestation (either hypertension, diabetes mellitus or hypercholesterolemia (or combined): aOR 2.4 (95%CI 1.8-3.1)/aHR 2.6 (95%CI 2.1-3.2). With ageing, the prevalence of hypertension increased more steeply after preeclampsia (P-value interaction 0.044). Suffering hypertension, diabetes mellitus and/or hypercholesterolemia occurred on average 8 years earlier after preeclampsia (39 ± 9 years) than normotensive gestation (47 ± 8 years).

Conclusions. The development of CV risk factors occurs almost a decade earlier in former preeclamptic women compared to women after normotensive gestation, predominantly, but not exclusively, due to the early and accelerated development of hypertension. Systematic CV risk (re-)assessment is recommended at least five yearly in former preeclamptic women from 35 years of age onwards.