

Cardiovascular health of women 10 to 20 years after preeclampsia considering the possible effect of PETN treatment during pregnancy (PAVA study)

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Objective. Women developing preeclampsia or foetal growth restriction during pregnancy are at higher risk for cardiovascular diseases later in life. We aimed to analyse cardiovascular health of women 10-20 years after affected pregnancies in comparison to women after uneventful pregnancies. In addition, we assessed a potential long-term effect of the NO-donor pentaerythrityltetranitrate (PETN).

Materials and Methods. Women 10-20 years after severe PE, including women receiving PETN during pregnancy and controls were assessed for baseline clinical data and cardiovascular function by transthoracic echocardiography, VICORDER and USCOM. SPSS was used for statistical analysis.

Results. 53 participants after complicated pregnancies (13 with former PETN intake) and 51 controls were recruited for follow-up at an average of 14 years after index pregnancies. Compared to controls, women after preeclampsia or foetal

growth restriction had a significantly higher incidence of arterial hypertension (13.7% vs 41.5%, $p < 0.001$), and were more likely to be hypertensive (41.2% vs 67.30%, $p = 0.008$). There were no differences in cardiovascular function observed. Affected women with PETN intake during pregnancy showed lower mean values for right atrial area and ventricle in comparison to controls and also to affected women without former medication.

Conclusions. In conclusion, our study results confirm that the risk of cardiovascular diseases is increased in women after preeclampsia and/or foetal growth restriction compared to women after uneventful pregnancies. Contrary to our expectations, no major cardiovascular changes were observed in our cohort 10-20 years post pregnancy. The observed differences found in right heart dimensions were within reference ranges and should be interpreted with caution.