Risk group identification, prevention and early detection of Hypertensive Disorders of Pregnancy (HDP)

Statement of the problem: Vascular complications may arise from pre-existing cardiovascular risk factors that lower the capability to withstand the increased hemodynamic mechanical and biochemical burden of gestation or from reduced physiological adaptive capability during the first half of gestation. Although the biological diversity in jeopardizing actions of associate risk factors implies tailored preventive measures, so far, most developed preventive strategies are rather generic than specific. Systematic risk analysis of those having encountered vascular complications throughout gestation may shed light on underlying disorder and with it tailored preventive strategies (Fig 1). Moreover, early-pregnancy maternal adaptive responses may additionally identify those at increased risk.

Methodology and theoretical orientation: Prior to pregnancy, short systematic evaluation of associated risk factors consistent with the metabolic syndrome and larger evaluation in those with prior vascular complicated pregnancy or preexisting disease associated with gestational vascular disorders may detect those at increased risk. Circulatory follow-up throughout the first half of gestation could be helpful in detecting those failing to circulatory adjust properly, increasing their risk additionally.

Findings: Generic preventive measures, such as aspirin and calcium, should be discussed in those with anticipated increased risk. Precision medication should be offered to those with serious underlying disorders as SLE and antiphospholipid syndrome, kidney disease, prior thrombotic events, chronic hypertension or cardiac failure. In order to improve maternal outcome, antihypertensive drugs should be instituted at the level of mild to moderate hypertension throughout gestation.

Conclusion and significance: Vascular complications in pregnancy may arise from preexisting cardiovascular, cardiometabolic, hemostatic or autoimmunological risk factors. Besides generic preventive actions, precision measures can be discussed and taken depending on personal underlying disorders.

Biography
Marc Spaanderman, MD PhD, is chair of the department of Obstetrics Maastricht University Medical Center MUMC. The past 20 years, his research group focusses on maternal health and the capacity to balance cardiovascular stress before, during and after pregnancy. As expertise center, his department structures its care around this topic in order to personalize treatment in an attempt to prevent future health problems during pregnancy and thereafter. Ways to improve patient empowerment and participation in individuals' care are central themes in the departments' health promoting programs. As initiator and president of the Limburg Obstetric Consortium, an obstetric-midwifery-maternity care and neonatology collaboration, he stands for structured and uniformly supplied transparent care for pregnant women and thereafter.

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