Introduction

Pre-eclampsia is a potentially life-threatening condition characterized by hypertension, proteinuria with or without pathologic edema. There are uterina dopplerometric changes and genetic mutations which may indicate increased predisposition to PE. In a non-invasive way we look for correlation between changes in a. uterina flow and the genetic risk of developing PE.

Methodology

The prospective case controled study was performed from 2015 to december 2017. Woman with singleton pregnancy attending their routine 1st trimester screenig at Riga Maternity Hospital were recruited. At 1st trimester ultrasound visit (11+0–13+6 w) the left and right a.uterinae PI has been measured. Blood samples for selected sequence variations in F5, F2, F11 (coagulation factor XI), MTHFR (methylenetetrahydrofolate), SERPINE-1, CYP4V2, SELE (E-selectin gene), GP6 (glycoprotein VI), AGT gene (angiotensinogen) un FGG (fibrinogen gamma gene) was taken. Singleton pregnancies with abnormal a.uterinae bloodflow was recruited as a study group. Controls was selected as each succeeding case with normal a.uterinae bloodflow.

Results

Women in the study group found an AGT mutation 2 times more often than controls. We also found the association of the MTHFR gene with modified a.uterina PI during the 1st trimester-pregnants in the study group were twice as likely to be the carrier of this gene mutation, which may have caused changes in the a.uterina flow.