COMBINED SCREENING FOR PREECLAMPSIA AT 11–13 WEEKS

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Objective:
To evaluate the implementation of combined screening for preeclampsia (PE) into the first-trimester screening for adverse obstetric outcomes at 11-13 weeks.

Methods:
This was a prospective observational study in women attending the first-trimester combined screening at 11-13 weeks. The risk of early-PE was calculated by ASTRIA software gmbh from maternal characteristics, uterine artery pulsatility index, mean arterial pressure (Figure 1), serum pregnancy-associated plasma protein-A and placental growth factor. The distribution of maternal age shows Figure 2. Women at risk for PE started with the prophylactic use of low-dose aspirin in early pregnancy. We estimated the detection rate (DR), false-positive rate (FPR), positive predictive value (PPV) and negative predictive value (NPV) for the prediction of delivery with PE before 34 weeks gestation.

Results:
The study population of 1538 singleton pregnancies was examined. When screen positivity was defined by risk cutoff of 1:200 using the algorithm for early-PE, 6.2% (n = 96) of women were screening positive and the incidence of early-PE was 1.0% (n = 16). The DR, FPR, PPV and NPV in the prediction of delivery with PE before 34 weeks gestation were 18.8%, 6.1%, 3.1% and 99.1%, respectively.

Conclusion:
The first-trimester combined screening is an effective method for selection of women at risk for early-PE which should start with the prophylactic use of low-dose aspirin in early pregnancy.

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