Gestation hypertension (GH) markers in first trimester of pregnancy in patients with metabolic syndrome (MS).
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Objective
The objective was to find markers of GH in patients presenting metabolic syndrome in early stage of pregnancy.

Material and Method
We conducted a prospective observational study for early prediction of pregnancy complications in women with signs of MS sending for their routine visit in pregnancy. At 11 to 13 weeks and 6 days of gestation we recorded maternal characteristics and medical history and performed combined screening for aneuploidies. Maternal serum biochemical and maternal characteristics were measured at that time. In the study we enrolled 127 pregnant women with MS in the 11 to 13 weeks and 6 days of gestation, who fulfill entry criteria according to recent MS definition and 30 healthy subjects. In the final analysis we included 154 women. Studied population was Caucasian women in singleton pregnancies. Before enrolling patients sign informed consent.

Results
The maternal characteristics and biochemical profile of women, who developed gestational hypertension are as follows. In pregnancies with gestational hypertension (n=7) 5.6%, we noticed significantly higher variables compare to healthy pregnancies: BMI 30.4 vs 21.6 m/ kg² (p<0.001), systolic blood pressure 121.3 vs 110.3 mmHg (p=0.022), total cholesterol 230.4 vs 198.9 mg/dl (p=0.013), E-Selectin 34.9 vs 24.5 ng/ml (p=0.0413), tissue plasminogen activator (t-PA) 3677.7 vs 1917.3 pg/ml (p=0.019).

Discussion
In conclusion, maternal serum metabolic syndrome markers and maternal characteristics are useful in assessing maternal metabolic derangements resulting in GH. Screening in first trimester of pregnancy is possible to identify pregnancies developing GH based on a mix of simple maternal demographic and clinical characteristics with potential of further improvement by simple and novel biochemical markers. Patients with MS in first trimester of pregnancy developing GH had significantly higher t-PA, what makes it very characteristic marker for this pregnancy complication.