Preterm delivery markers in first trimester of pregnancy in patients with metabolic syndrome (MS). ID-2941

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Objective

The objective was to find markers of preterm delivery(PD) in patients presenting metabolic syndrome in early stage of pregnancy.

Material and Method

We conducted a prospective observational study for early predicton 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 biochemic 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.
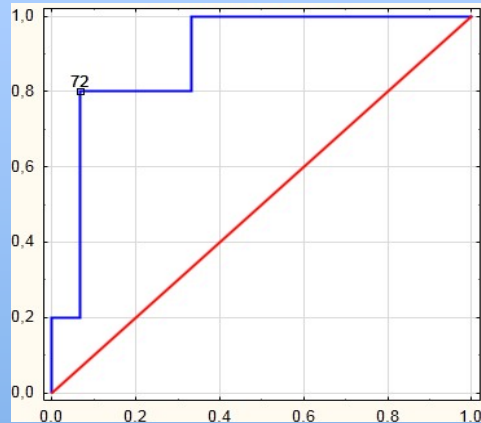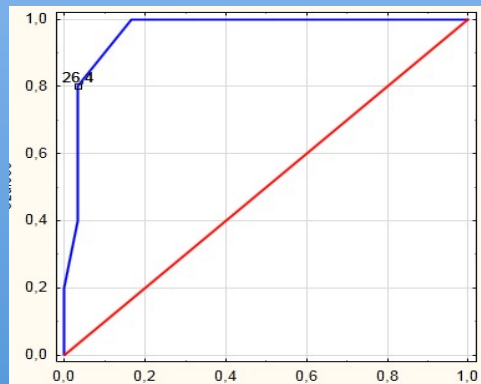

Figr.1 ROC for PD and weight in I trimester of pregnancy

Figr.2 ROC for PD and BMI

Results

The maternal characteristics and biochemical profile of women, who delivered preterm are as follows. In pregnancies with gestational (n=4) 3,2% , we noticed significantly higher variables compare to healthy pregnancies: weight before pregnancy was 78,4 vs 64,0 (p<0,001), and weight in the first trimester of pregnancy 79,6 vs 64,0 (p< 0,001). Statistical parameters AUC, sensitivity, specificity for preterm delivery were as follows: weight in first trimester of pregnancy for cut-off 72kg 0,893, 0,8 0,923; weight before pregnancy for cut-off 72 kg 0,907, 0,8, 0,93; weight gain during pregnancy 12kg 0,796, 0,8, 0,75; BMI 26,4 kg/m^2 0,796, 0,8, 0,75.

Discussion

In conclusion, maternal serum metabolic syndrome markers, Adiponectin and E-selectin show no significance in improvement of detecting pregnancies at risk of preterm delivery. Antropometric parameters are useful like BMI > 26,4, weight gain > 12kg, weight before pregnancy and weight in first trimester of pregnancy > 72kg should be considered as risk factors for preterm delivery in patients with Metabolic Syndrome.