P-0183 | POSTER | Intra-uterine growth restriction: diagnosis, intra-uterine monitoring, timing of the delivery, and long-term follow-up

RISK FACTORS FOR PREMATURE AGING OF PLACENTA: COMPARATIVE STUDY OF PERINATAL OUTCOMES BETWEEN GRANNUM GRADE III PLACENTAS AND GRANNUM GRADE I-II PLACENTAS

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Abstract:

Introduction: The placenta aging has been related with intrauterine fetal growth, low maternal age, Caucasian, multiparity, hypertensive states and smoking habit. Grannum P. classification is the most used for its assessment. The association between grade III placenta (G3P) and ex-smoking or smoke-exposed pregnants has not been studied.

Main outcome: To asses if smoking, being an ex-smoker or a passive-smoker is a risk factor for developing grade III placenta, as well as if there is a smoking-free period of time to avoid the effect of smoking over placenta.

Material and methods: A retrospective case-control study of single pregnancies followed-up at the Obstetric Ultrasound Unit between January 2013 and January 2014. Placental grading according to Grannum classification was stablished through abdominal approach between 34-36 weeks of gestation and two groups were established: grade III placenta and grade I-II placenta (G1-2P). Maternal and paternal characteristics, type of delivery and perinatal outcomes were collected.

Results: Baseline characteristics were similar between the two groups. In G3P the incidence of hypertensive disease of pregnancy was higher($p=0,0107$). The percentage was similar for premature birth, 1st and 5th minute Apgar, type of delivery and cesarean due to risk of loss of fetal wellbeing. A lower neonatal weight was found in G3P, at the same median days at delivery, with a mean difference of 148,156($p=0,008313$. Regarding weight percentile, it was found a p35 in G3P and a p47,5 in G1-2P($p=0,08235$).

15% of the total pregnant were smokers. In G3P group it was found a higher frequency of smokers and ex-smokers since 1st trimester of pregnancy ($p=0.0001$), as well as pregnant non-smokers with an smoking partner($p=0,0001$). There was an strong evidence for association between pregnant smokers and smoking partners($p=0,0001$). No difference was found regarding to neonatal weight comparing smokers, ex-smokers and ex-smokers since 1st trimester of pregnancy. The length of pregnancy was lower between G3P pregnant smokers compared to G1-2P pregnant smokers, with a mean difference of 8 days ($p=0,00091$).

Conclusions: There is a strong evidence for association between smoking during pregnancy, quitting smoking at the beginning of the pregnancy or being a passive smoker with development of G3P. Some pregnant smokers don`t develop premature aging of placenta, it could be due to either other parameters or a later aging (data were collected between 34-36 weeks). The association between quitting smoking at the beginning of the pregnancy and not having a smoking partner reduces the risk of developing G3P.