The Fetus As Patient

# ABSTRACT BOOK

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IUGR FETUS

# THE INTRAUTERINE GROWTH RETARDATION AND PREGNANCY INDUCED HYPERTENSION

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**Introduction:** PIH is the most common single etiological factor which is causing fetal intrauterine growth retardation (IUGR). In 50-70% of fetuses with IUGR exists increased maternal blood pressure. It has been proven that the incidence of IUGR is increasing with gaining weight and hypertension duration. Increased blood pressure is leading to decreasing uteroplacental blood flow, also reduced oxygen flow and food to the fetus causing growth restriction. Popular diagnostic method and fetal monitoring is ultrsonography (US). **Aim:** The basic idea of our research is early identification of eventual intrauterine growth restriction and fetus development using ultrasound method. **Methodology:** 5,77± We examined 196 patients between age 15 and 41 years (average age 25,73 years), divided in two groups: group A based on 67 pregnancy induced hypertensive patients and group B based on 129 normotensive pregnancises. Real-time scanning was performed using ultrasound unit Simens with convex array of 3,5 MHz. The fetal growth was followed with the following parameters: BPD, HC, AC, FL and HC/AC ratio. At the same time the placenta is examined (localisation and the level of maturation) and the amount of amniotic fluid volume. During the statistical analyzes, beside the descriptive method, a statistical parameter test was used: Student T-test, also nonparametric test: 2 test, Kolmogorov- Smirnov test and Mann-Whitney U test. **Results:** Statistic calculation of the parameters received with US in the 20 g.a., showed that there isn't obvious difference between group A and B ($p>0.05$) regarding the growth and development of the fetus. In 26 g.a. results showed that there is obvious difference ($p<0.01$) in HC, FL and AC. Statistically there is also difference in ($p<0.05$), while the difference between middle values of the HC/AC ratio is on the age. In 32 g.a. our results are showing high significant statistical difference between groups, especially obvious regarding BPD, FL, AC and HC/AC ratio ($p<0.01$). In 36 g.a. based on HC/AC relation suspected IUGR in group A are in 21.31% fetuses, from 61 US examined fetuses in total from this group ($p<0.01$). Again in 38 g.a. we were calculating HC/AC ratio, which middle value for the group A was 1.032 + 0.044, while for group B was 0.992 +0.028. Based on this relation and compared with referred values, in group A 25.29% had results and values that describe IUGR ($p<0.01$). Middle value of the HC/AC ratio in 40 g.a. for group A was 1.01 + 0.024, while for group B was 0.98 +0.013, which was statistically obviously different ($p<0.01$). During the pregnancy, with US are evaluated placenta and the assessment of amniotic fluid. Examined results after 26 g.a. showed faster aging of the placenta and oligohydramnion in hypertensive pregnancies ($p<0.01$). The approximate birth weight of the newborns from group A was 2807.6 +574.28 g, while in group B 3497.9 + 321.73 g.; newborns from the hypertensive pregnancies have lower birth weight comparing with the newborns from the normotensive pregnancies ($p<0.01$). Approximate head perimeter of a newborn in group A was 33.4+ 1.7 cm, while in group B 34.97 + 1.11 cm. Statistical calculation showed high obvious difference ($p<0.01$). The newborn length in group A was 47.86 + 2.52, while in group B 51.06 + 1.18 cm. ($p<0.01$). **Conclusion:** Based on our research it can be concluded that IUGR is the main complication in the fetus from hypertensive pregnancy. With ultrasound scan the changes in the fetus development can be detected, including the fast placenta aging, even before increased artery blood pressure above normal values, which makes US diagnostically the best option for antenatal detection of retarded foetal development and growth. Newborns from hypertensive pregnancies have reduced weight and length and they adapt harder on extrauterine live.

**Key words:** intrauterine growth retardation, pregnancy induced hypertension, ultrasonography

TECHNIQUES FOR PERINATAL DIAGNOSIS

# CYCLOPIA - PRENATAL DIAGNOSIS - CASE REPORT

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**Introduction:** The term holoprosencephaly refers to a group of disorders arising from a failure of normal forebrain development during early embryonic life.The reported incidence of holoprosencephaly is approxiamately 1:250 during embriogenesis and 1: 16 000 of live births. About 30-40% of all affected have an underlying chromosomal disorder. In these disorders embryologic defect affects the development of both, the brain and the face. Cyclopia is a facial deformity characterized by median monophatalmia, synophtalmia, or anophtalmia. There is no nose or median facial bones. A proboscis is usually present. **Case report:** A 36 year-old women gravida 2 para 0, was reffered to our institution at 29 weeks of gestation with diagnosis of polyhydramnios and fetus microcephaly. Ultrasound examination demonstrated severe polyhydramnios, singleton fetus with microcephaly. BPD, OFD and HC were decrised, manje 10th percentile. Another mesurements, AC and Fl corellated with gestational age. The calvaria appeared to be filled mainly with fluid. Transverse sonogram demonstrated a monoventricule and fused thalami. The single orbit and proboscis werw seen in the midline. There was no nose. No other abnormality was seen. The pregnancy was terminated at 30 weeks of gestation. Postmortem examination reveled a male fetus with developmental abnormalities of the prosencephalon, semilobar holoprosencephaly, cyclopia, proboscis. **Summary:** With the advent of transvaginal ultrasound alobar HPE can be diagnosed antenataly from as early as 9 weeks and semilobar and lobar HPE from 13 and 21 weeks respectively. Prenatal MRI could be usful to differentiate between HPE and other conditions or in the diagnosis of lobar HPE.