



Proceedings

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Correlation Analysis of the Feto-Placental Parameters Et Intrauterine Growth Retardation

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Introduction/ Background

A number of studies suggest that some disproportions and retardations in feto-placental growth may lead to various pathologies in adults.

Aims

The aim of the present work was to identify alterations in correlations between placental and fetal parameters in cases of intrauterine growth restriction (IUGR) at 20-25 weeks of gestation (wg).

Methods

18 cases with IUGR and high placenta/fetal weight index (PFI) have been compared with 20 controls in cases of induced abortions for socio-economic reasons at 20-25 wg. Recorded data included weights of placenta (PW) and fetus (FW), fetus length (FL), head (Ch), chest (Cch), abdominal (Ca) circumferences, fetal kidneys (KW), liver (LW) and heart (HW), as well as some indices(FPI, FW/FL, LW/PW, HW/PW, KW/PW). The correlation analysis of the morphometric data was performed.

Results

IUGR group had smaller parameters of FW, FL, Cch, Ch, and Ca. All IUGR cases had decreased LW; W and HW. PW was unchanged at 20-22 wg and increased at 23-25 wg, compared with controls. The negative correlation has been found between PW and LW/PW, FPI and LW at 20-22 wg, and between W and HW/PW at 23-25 wg. The longer gestation the more new positive strong correlations have been discovered within the IUGR group (between FPI and HW, KW, LW, KW/PW).

Conclusions: the study suggests that the increase in the number and the intensity of correlations between morphometric parameters might represent a discrepancy between the fetal and placental growth at 20-25 wg and alterations in fetal organ adaptation mechanisms, which may result in future pathologies.