IS-68  Doppler assessment of fetal aortic isthmus flow in twin growth discordance

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Objective: The purpose of this study was to investigate the Aol difference between larger fetus and smaller fetus in twin and to evaluate the predictive value of early diagnosis of hemodynamic disturbance to develop discordant growth in twins. Methods: This prospective study on fetuses with 49 twin pairs was performed to obtain Aol blood flow data. Cases with structural or chromosomal abnormalities and con-twin death were excluded. The interval from examination to delivery was within 4 weeks and 3 cases over 4 weeks interval were re-examined. Assessment of fetal Aol Doppler parameters were peak systolic velocity (PSV), end-diastolic velocity (EDV), times-averaged maximum velocities (TAMX), pulsatility index (PI), and resistance index (RI). And according to the direction of the diastolic flow in the Aol, antegrade and retrograde flow were made and was used for analysis of perinatal outcomes of each fetus. The predictive value of Aol Doppler parameters in predicting growth discordance was assessed using ANOVA and logistic regression analysis of quantitative variables in each fetus of dichorionic and monochorionic twins. Results: Gestational weeks at delivery, birth weight and the incidence of growth discordance over 20% or more common in monochorionic twins than that in dichorionic twins. The Aol PI and RI were significantly higher in smaller fetus than in larger fetus of dichorionic and monochorionic twin. Retrograde flow was noted in eight of 48 cases (16.7%) and only one was larger fetus and the other were smaller fetuses with growth restriction. A significant correlation was found between the Aol PI and birthweight (p=0.018) and between the PSV and growth discordance (p=0.032). In monochorionic twin, a linear correlation between the Aol PI and birthweight (p=0.004) and between Aol PI and growth discordance (p=0.031). And there also revealed the meaningful correlation between the PSV and birthweight (p=0.036) by logistic regression analyses. Conclusions: On the basis of our observation, Aol PI was revealed their hemodynamic status that might be help to predict the development of growth discordance in twin.

IS-69  Link between Maternal MTHFR Gene Polymorphisms and the Risk of Down Syndrome Offspring

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Objective: To study the frequency of methylenetetrahydrofolate reductase (MTHFR) 677C→T mutation in Egyptian mothers having a child with Down Syndrome (DS) and matched control mothers. Patients: Forty mothers aging <40 years with previous history of bearing a DS with karyotypically confirmed full trisomy 21 plus 30 healthy mothers with healthy children as matched control mothers. Design: A case-control study to examine the association of genetic polymorphisms in the MTHFR gene involved in folate metabolism that is known to lower the activity of this enzyme. Estimation of maternal plasma homocysteine (Hcy) to methionine (Met) ratio and lymphocyte methotrexate (MTX) cytotoxicity to assess the occurrence of MTHFR 677C→T mutation. Results: The MTHFR 677C→T polymorphism is more prevalent among mothers of infants with DS compared with the controls, with an odd ratio of 1.9. Additionally, mothers of infant with DS have significant increased plasma levels as well as lymphocyte MTX cytotoxicity relative to the controls. Conclusion: Aberrant folic acid metabolism secondary to MTHFR polymorphism leads to a significant reduction in plasma methionine and increase in homocysteine concentrations. These metabolic dysfunctions have been implicated in increasing the maternal risk for having DS infant.

IS-70  Three-Dimensional Sonography in the Diagnosis of a Cystic Sacrococcygeal Meningomyelocele: A Case Report

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Objective: Sacrococcygeal Meningomyelocele have been diagnosed prenatally on sonograms as masses of cystic or mixed echogenicity from the sacral area and protruding through the perineum or buttocks. Methods: CASE REPORT Results: A 29-year-old South korean woman, gravida 0, para 0, was referred to our hospital at 27 weeks of gestation for evaluation of a fetal mass in the sacral region, which had been identified in her second trimester scan. A detailed ultrasound (US) examination, using a Voluson E8 scanner (GE Healthcare, Milwaukee, WI) with convex 4.7-MHz transducer, showed an 2.9 x 1.96 x 1.34 cm multicystic mass in the sacral region that appeared to originate from the tip of an otherwise normal sacrum. The spine appeared intact throughout its length on both longitudinal and transverse scanning planes, the presence of a thin membrane traversing the cystic lesion was suggestive of a possible neural tube element. There were no signs of hydrops or polyhydramnios. The growth of the fetus was normal for gestational age. There's no feeding artery with Color Doppler study within the wall of the cystic structure. Evidence of a feeding artery within the wall of the lesion is considered more characteristic of an SCT than of a meningomyelocele. Based upon these findings, a diagnosis of the cystic meningocele was made. At 39 weeks of gestation, a elective cesarean section was performed. The male neonate weighed 3375 g, with Apgar scores of 8 and 9 at 1 and 5 minutes, respectively. The pH of her umbilical artery blood was 7.302. Laboratory data at the time of birth detected a mild leukocytosis WBC count was 15010 x 106/L, but otherwise laboratory data were normal: Hb 17.6 g/dl; Hct 47.2%. Physical examination of the neonate revealed an 2.9 x 3.1 x 4.1 cm soft cystic mass with skin defect. MRI examination confirmed the presence of sacral meningocele with cord tethering in the expected region. Conclusion: We report a case in which Three-Dimensional Sonography imaging was helpful for making a prenatal diagnosis cystic sacrococcygeal meningomyelocele.