

**Subchorionic Hematoma in the First Trimester; Is it an Early Marker of Abnormal Placentation?**

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**OBJECTIVES:** The study was to evaluate the factors associated with development of subchorionic hematoma in the first trimester and its relationship with pregnancy outcome. Furthermore, to verify the hypothesis made by others that the early subchorionic hematoma could be an early marker of abnormal placentaion, relationship between 1<sup>st</sup> trimester subchorionic hematoma and arterial Doppler velocimetry in the 2nd and 3rd trimesters was evaluated.

**STUDY DESIGN:** Medical records of patients who were provided with antenatal care from the 1st trimester and delivered at our institute between January 2000 and April 2004 were retrospectively reviewed. Based on the 1sttrimester ultrasonography, non-hematoma group (n=64) and hematoma group (n=50) were randomly selected. Two groups were compared for patients' characteristics, umbilical artery and uterine artery Doppler velocimetries, AFI, adverse perinatal outcome, and maternal complication.

**RESULTS:** Development of early subchorionic hematoma was not correlated with advanced maternal age, parity, previous delivery mode, maternal height, pre-pregnancy weight, amount of weight gain, body mass index, and placenta location. Also no significant difference was found between the two groups regarding perinatal outcome or maternal complication. Although statistically insignificant, incidence of macrosomia was slightly higher in the hematoma group. Interestingly, incidence of positive triple test result subsequently confirmed genetically normal by amniocentesis was significantly increased in the hematoma group ( $p<0.05$ ). No difference in umbilical and uterine arteries Doppler velocimetry was found between the groups.

**CONCLUSION:** Early subchorionic hematoma was not an important correlate of adverse pregnancy outcome, however, it was correlated with increased false-positive rate of triple test. Insignificance of arterial Doppler velocimetry between the groups imply that pathophysiology of subchorionic hematoma may not be directly related to abnormal placentation.