

Uterine Artery Doppler as A Predictor of Pre-Eclampsia At 18-28 Weeks of Gestational Age

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Abstract

Background: The doppler is a non-invasive method for the evaluation of fetoplacental circulation. A high resistance index and pulsatility index and persistence of uterine notching in uterine Doppler waveforms have been shown to predict pre-eclampsia. We in the current study tried to evaluate Whether Abnormal Uterine Artery Doppler Velocimetry Can be used as an effective screening test to predict preeclampsia? **Methods:** Doppler study after routine fetal anomaly scan. After assessment of inclusion and exclusion criteria, n=60 high-risk antenatal women were selected for the study in the department of Obstetrics and Gynaecology of Prathima Institute of Medical sciences. Women booking for antenatal care were examined and investigated. The women were subjected to Doppler ultrasound. At 18-28 weeks, a Doppler ultrasound (with 3.5 MHZ curvilinear probes) of uterine artery waveform was performed on women using an ultra-sound. **Results:** The uterine artery doppler study indicated the presence of doppler diastolic notching at 18 – 28 weeks. The notching was found to be present in n=22(36.7%) cases and absent in n=38(63.3%) cases. A comparison of uterine artery notching alone and uterine notch with RI >0.65 with development of preeclampsia revealed uterine artery notch was found in n=22 cases out of which n=6 cases were preeclampsia. Not with RI>0.65 was found in n=11 cases with preeclampsia. Uterine Artery Notch has 35.29% sensitivity, specificity is 62.71% Uterine Artery Notch+0.65 64.71% sensitivity, specificity is 72.09%. **Conclusion:** Uterine artery Doppler is a non-invasive method for evaluation of Fetoplacental circulation without any disturbance to pregnancy. Uterine Doppler at 18-28 weeks of Gestation can be used as a reliable screening test for the prediction of Preeclampsia and intrauterine growth restriction and in cases where the test proves to be abnormal increased surveillance and delivery in a well-equipped set up is necessary to reduce the maternal and fetal complications.