

Maternal Uterine Artery Doppler In The First And Second Trimester As Screening Method For Preeclampsia And Fetal Growth Restriction

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Abstract:

Pre-eclampsia (PE) and fetal growth restriction (FGR) are serious complications of pregnancy, which are associated with high morbidity and mortality. The aim of this study was to examine the value of uterine artery Doppler at 11–14 and 20-24 weeks of gestation in the identification of women at risk of developing pre-eclampsia and fetal growth restriction. This is a retrospective cohort study comprised 212 singleton low-risk women undergoing routine antenatal care, at a tertiary referral University Hospital of Obstetrics and Gynecology “Koço Gliozheni” in Tirana, Albania. The right and left UA were assessed by color and pulsed Doppler and the mean pulsatility and resistance indices as well as the presence of unilateral or a bilateral protodiastolic notch were recorded at 11 to 14 and 20 to 24 weeks’ gestation. Abnormal UA Doppler parameters on the incidence of Pre-eclampsia, small for gestational age newborn, protodiastolic notch. The ultrasound machine used was Aloka Echo Camera L. 8.8% developed PE. In Doppler examination the mean pulsatility index of the two arteries was determined and the predictive value of a mean pulsatility index > the 95th centile in the prediction of PE and/or FGR was calculated. Compared to the pregnancies with a normal UA mean RI at the first and second trimesters, pregnancies with UA mean RI >95th percentile only at the first trimester showed an increased risk for HD.

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Key words: Doppler ultrasound, Pre-eclampsia, Fetal growth restriction, Screening.