INTRAPULMONARY ARTERY DOPPLER EVALUATION: PROSPECTIVE LONGITUDINAL STUDY IN NON-COMPLICATED VERSUS GESTATIONAL DIABETES POPULATION

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Fetal lungdevelopment can be studied using power and color Doppler velocimetry ultrasound technique. The vascular system and air tree of the fetal human lung develops simultaneously and breathing function depends upon a correct blood-air exchange. Respiratory neonatal complications remains an important cause of neonatal morbidity and mortality of various ethiology. We performed a prospective longitudinal study in a cohort of 78 non complicated pregnancies and 27 diabetes complicated pregancies. The following vascular Doppler indices were examined every two weeks from 26 weeks of gestation to term: Peak systolic velocity(S.AP), Diastolic velocity(D.AP), medium velocity(Vx.AP), Pulsatility index(IP.AP) and resistence index(IR.AP). Gestational age reference percentile curves were constructed. To evaluate evolution of each parameter with gestational age, we calculated mean values for each quincenal period. Both in the non complicated pregancy group as gestational diabetes group, pulsatilty index in intrapulmonary artery shows a significant decrease between the period 32-36 weeks of gestation, but with significantly higher mean values in the diabetes group as is shown in table 1 and figure 1. We can deduce that this differences could reflect the vascular aspect of lung function impairment in fetuses of diabetic mother, on the other hand well known as clinical finding in obstetric practice. Further larger studies are needed to confirm our findings.