

Association of maternal weight gain in pregnancy and fetal linear growth and length at birth.

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All primi gravidae, age between 19 - 34years, singleton uncomplicated pregnancies that delivered after 37 weeks of POA were included into the study population (178 cases). Their height was recorded at the booking visit and the weight gain was recorded at the end of T1 (10 -12 wks), end of T2 (28 - 30 wks) and at the T3 (36 -37wks). Fetal linear growth measurements (femur length) were taken using real time ultrasound scan in three occasions. 16- 18 weeks of gestation, 28 - 30 weeks of gestation, 36 - 37 weeks of gestation, respectively. Velocity of weight gain and velocity of femur growth were calculated in both 2nd and 3rd trimesters. At birth neonatal crown heel length and weight were measured and sex was recorded. Study population was divided into two groups based on birth length of newborns and divided to stunted group and non stunted group, using height for age and sex, growth chart (CHDR- Sri Lanka). Two groups were compared in relation to maternal height, antenatal weight gaining, fetal femur growth rate, and birth weight of babies. Pearson correlation was use to find a correlation between maternal weight gain in 2nd and 3rd trimesters and growth of femur length (fetal linear growth) in same trimesters. Comparing two groups, stunted and non stunted, there were statistically significant difference was found in the two groups in relation to maternal height.