Study of impact of maternal Body Mass Index (BMI) on neonatal outcome at BPKIHS, Dharan, Nepal

Background: In full term pregnancy, birth weight is greatly influenced by the fetal growth, which is closely linked to nutritional status and BMI of mother during the pregnancy.

Objectives: To study the impact of maternal BMI on neonatal outcome and its association with neonate needs for NICU admission and care at BPKIHS.

Methods: It is a hospital-based cross-sectional descriptive study conducted over a period of one year at BPKIHS, Dharan. Ethical clearance was obtained from IERB, BPKIHS. (1) Sample size: 500, (2) Baseline maternal and neonatal data recorded according to the proforma, (3) BMI calculated according to WHO guidelines and (4) Ethical clearance was obtained from IERB, BPKIHS.

Statistical Analysis: For inferential statistics Chi-square test and Pearson coefficient was used. Correlations done to study the significant difference between maternal BMI and related variables of neonatal outcome at 95% CI where p=0.05 was taken as significant.

Results: Out of 500 pregnant mothers, 52.2% were primigravida with mean age 25 years and 94.8% had weight >60 kg and mean height of 155 cm. The mean BMI during pregnancy was 24.22. Maximum new born (73.4%) were delivered by NVD. 53% were female new born. Mean birth weight and length were 3190 gm and 51 cm, respectively. Mean head circumference was 34.37 cm. Total preterm delivery was 10.4%. Ponderal index of 2.6% was <2 while 1.4% had PI>2. AGA newborns were 93.6%. Neonates requiring NICU admission and care were only 4.8%. Significant correlation was found between the maternal BMI and birth weight.

Conclusion: This study showed the impact of regular ANC checkups on neonatal outcome and significant effect of maternal BMI on neonatal anthropometry and mode of delivery.

Biography
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