

13.

**The relationship between maternal serum leptin, umbilical cord leptin and birth weight in Negroid women: A cross sectional analytic study***Mbachu II, Mbachu CNP, Udigwe GO, Aniebue UU,***Correspondence:** Dr. Ikechukwu I Mbachu Email: imbachu@yahoo.com**Objective:** To determine the association between the mean maternal Leptin, mean neonatal (cord blood) Leptin level and the mean birth weight.**Methodology:** This was a cross sectional analytical study carried out over 5-month period. The control group were neonates with normal birth weight and their mothers. The normal birth weight was defined as birth weight between 2.50 to 3.99kg. The case(experiment) groups included neonates with macrosomia and their mothers. Blood samples were collected from the pregnant women at term and cord blood was also collected after delivery. The serum was extracted and used to determine the leptin level in the mothers and their neonates. Other relevant information was obtained with a proforma.Data was analyzed using Stata statistical package version 14. Continuous variables including age, birth weight mean leptin levels were summarized by mean $\pm$  standard deviation. There was test of associations between variable to determine significant relationship at a p-value of  $< 0.05$ **Result:** A total of 45 mother-neonate pairs that completed the study were used in the analysis. This comprises of 23 mother -neonate pair with actual for weight and 22 mother-neonate pair with macrosomia. The mean birth weight was  $3.78\pm 0.05$ . The mean cord leptin level was  $4.33\pm 1.93\text{ng/l}$ . The value was not significantly higher in macrosomic neonates when compared to those with normal weight ( $4.59\pm 1.86$  versus  $4.06\pm 1.87$ ) with a p-value of 0.36. The mean maternal serum leptin was  $4.90\pm 1.82$ . This did not have statistically significant relationship with the birth weight with a p-value of 0.22. The abdominal circumference of the neonate had a significant association with the cord leptin level (p-value =0.0361).**Conclusion:** There is no significant association between cord blood leptin level and birth weight among negroid black women.

DOI: 10.5281/zenodo.7263269