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Correlation between plasma levels of leptin in the umbilical cord in the new born, and its relation to birth weight

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The adipocyte-specific product of the ob gene, called Leptin, plays a major role in the regulation of appetite, body weight, and energy balance by sending a report to the brain about the amount of adipose tissue in the body. Serum leptin levels have been shown to correlate with weight and body fat content in obese adults, while little is known about serum leptin levels in the newborns. In the present study, we ought to investigate the relationship between the plasma levels of leptin in the umbilical cord in the new born, and its relation to birth weight in male and female infants. The current study was conducted at Aleppo University Maternity Hospital. A group of 82 newborns (41 males and 41 females) were enrolled in the study. All of the newborns were healthy and delivered normally, and their mothers have had no remarkable illnesses during their pregnancy. Overall, serum leptin concentrations in those newborns ranged from 0.5 to 55 ng/ml with mean of 14.693 ± 13.65 ng/ml. Serum leptin concentrations in males (ranged from 0.5 to 40 ng/ml, mean 10.26 ± 10.1 ng/ml), were significantly ($P = 0.003$) lower than those in females (ranged from 1.5 to 55 ng/ml, mean 19.12 ± 15.335 ng/ml). Serum leptin concentrations were positively correlated with each of: birth weight ($r = 0.473$, $p < 0.01$), body weight/body height ($r = 0.477$, $p < 0.01$). BMI ($r = 0.431$, $p < 0.01$). There were no significant correlation between serum leptin values and the concentrations of glucose ($r = 0.235$, $p = 0.034$), cholesterol ($r = 0.108$, $p > 0.05$), and triglyceride ($r = -0.22$, $p = 0.047$).

Biography

Loai A Shakerdi has completed his Ph.D. at the age of 38 years from University of Glasgow (UK). He was the head of the department of Laboratory Medicine. He is the clinical director of Aleppo University Hospital. He is the head of the committee for planning the annual strategic plan for the development and implementation of scientific research in the higher education system in Syria. He has published more than 20 papers in reputed journals, and two academic books. He is serving as an editorial board member of Mediterranean Journal of Nutrition and Metabolism.

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