

Effect of Maternal Hemoglobin on Anthropometric Measurements of Full Term Newly Born Babies

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Abstract

Background Hemoglobin of the mother during pregnancy is well established to be contributors to abnormal prenatal development and pregnancy outcomes.

Objectives To study the effect of maternal anemia on anthropometric measurement of full term newly born babies.

Methods Two hundred pregnant women at time of delivery were investigated for their Hemoglobin. Their newborns were investigated for anthropometric measurement (weight, length, head circumference and chest circumference) immediately after birth. The questionnaire involved questions about age, parity, economy, educational level, and antenatal care of the mothers, and also sex, gestational age, anthropometric measures (weight, length, head circumference and chest circumference) and outcomes of the newborns.

Results From 200 pregnant women who were included in our study, 115 (57.5%) of them delivered by normal vaginal delivery and 85 (42.5%) delivered by caesarian section. Sixty (30%) of mothers were anemic. Five (2.5%) of the newborns were small for gestational age all of them from anemic mothers.

Conclusion Anemia affects neonatal outcomes in full term babies; full term babies of anemic mothers were in the normal anthropometric range, but they were much lower than babies of normal mothers.

Keywords Pregnancy, Anemia, Small for gestational age

Introduction

Anemia is one of most prevalent nutritional deficiency problem afflicting pregnant women ⁽¹⁾. This is particularly a major health problem in developing countries, where nutritional deficiency, malaria and worm infestation are common. Prevalence in non-industrialized countries varies between 35 - 75 %, with the average being 56 % ⁽²⁾.

Maternal anemia is considered a risk factor for adverse pregnancy outcome ⁽³⁾. It is responsible for 40-60% of maternal deaths in developing countries. Anemia that complicates pregnancy threatens the life of both the mother and the fetus ⁽⁴⁾. Anemia is hemoglobin (Hb)

concentration below 110 g/l ⁽⁵⁾. The prevalence is higher among the primigravidae than multiparous women ⁽⁶⁾. Maternal nutritional state is an important predictor of perinatal results. This concept has gained more importance in the recent years as there is now growing acceptance of the 'fetal origin of adult disease' hypothesis ⁽⁷⁾. The objectives was to study the effect of maternal Hb on anthropometric measurements of full term baby.

Methods

This study is a cross-sectional study included 200 pregnant women who attended to the obstetrical ward in Al-Yarmook Teaching