

Low Birth Weight in Baghdad, Iraq

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Summary:

Background: Many reports demonstrated an increase in low birth weight in the past three decades. This work was carried out to study the prevalence of low birth weight and its determinants among neonates delivered in Baghdad, Iraq.

Materials: A total of 400 singleton newborns delivered at two hospitals in Baghdad city during 15th June to 15th Nov. 2003 were included in the study.

Results: Half of the neonates were born with low birth weight. Out of the low birth weight neonates, there were 83% preterm neonates. Prevalence of low birth weight neonates was significantly associated with maternal age, age at marriage, parity, and anaemia.

Conclusion: This study indicates that the most appropriate approach for prevention low birth weight and prematurity in newborns is through improvement of nutritional status and health services.

Key words: low birth weight preterm, Baghdad Iraq

Introduction:

Low birth weight (LBW) is universally the most important determinant of the chance of newborn to survive and experience health growth and development¹. Infant mortality rate is highly correlated with the proportion of LBW in the community²⁻⁴. Iraq is a unique situation with infant mortality rates that have shown an upward trend⁵⁻⁸ and many reports demonstrated an increase in the prevalence of LBW in the past three decades⁹⁻¹². The situation in Iraq clearly illustrates the impact of man made - disasters on humanity.

This work was carried out to study the prevalence of LBW and its determinants among neonates in Baghdad, Iraq.

Materials and methods:

A total of 400 singleton newborns delivered at Al-Elwayia Maternity Teaching Hospital and Al-Habebia Maternity and Paediatrics Teaching Hospital in Baghdad city during the period 15th June to 15^h November 2003 were included in the study.

Information regarding the mother were collected by direct interview of mothers. The data requested included demographic variables, reproductive health, medical and obstetrical history during current pregnancy (hypertension, UTI, iron deficiency anaemia and antepartum haemorrhage) and antenatal care visits (ANC).

Estimation of daily caloric intake during 24 hours was calculated from dietary record of type and amount of food intake. Birth weight was taken from birth records.

Multiple logistic regression¹³ was done to find out which variables are significantly and independently associated with LBW (birth weight less than 2500 gm)¹⁴. P value less than 0.05 was considered statistically significant.

Results:

Half of the neonates were born with LBW. Out of the LBW neonates, there were 166 (83%) preterm neonates.

Prevalence of LBW was significantly associated with maternal age, age at marriage, number of pregnancies, complications during pregnancy (hypertension, UTI, iron deficiency anaemia and antepartum haemorrhage), daily caloric intake and antenatal care (p < 0.05). These findings are shown in Table 1.

Table 1 Studied variables associated with LBW

Variable	β	SE	P value
Maternal age	0.7	0.8	0.004
Age at marriage	1.0	0.7	0.0001
Parity	0.6	0.8	0.003
Medical and obstetrical complications (hypertension, UTI, IDA and APH)	-0.03	0.05	0.003
Daily caloric intake	0.4	0.02	0.0001
Antenatal visits	0.7	0.2	0.001

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Discussion:

The prevalence of LBW in Eastern Mediterranean countries varies greatly with economic status of these countries. Very low rates are found in Bahrain, Cyprus, Kuwait, Qatar and United Emirates while high rates prevail in Afghanistan, Djibouti and Somalia¹.

The finding that 50% of neonates were born with LBW is much higher than that previously reported in other teaching hospitals in Baghdad in 1993 and 1994 (15.1 % and 13.3%, respectively) '4'. It is similar to a recently reported figure (51.8%) in a hospital study in a relatively rural area 12. The rate of LBW in Iraq was 9% in the period 1980 - 1988 increased to 21% in 1994 '9' and to 23.8% in 1998 11.

Our finding that 83% of LBW neonates were preterm is similar to a recent reported figure in Iraq (80%) '2. It is much higher than the 30% reported by Stoll and Kleigman 16 in developing countries. These high

figures of LBW and preterm neonates may be attributed to United Nations economic sanctions. The caloric intake of Iraqi population decreased to 1000 Calories (42 MJ) per person per day ¹⁷ for the period 1990. to 1997 and increased lastly to 2475 Calories ¹¹. The most important established determinants of restricted fetal growth are low pregnancy body mass index and low gestational weight gain ¹⁸⁻²⁴ which may be attributed to low caloric intake. Other workers have reported that maternal caloric intake was significantly associated with LBW ²⁵⁻²⁷ and demonstrated that nutrition of women during pregnancy is widely regarded as important determinant for the development of unborn baby.

In agreement with other studies similarly maternal age, age at marriage and parity ¹ hypertension, UTI, and antepartum haemorrhage ^{27,28} and iron deficiency anaemia ²⁹⁻³² were found to be associated with LBW.

Our finding that visits to ANC services were not associated with decrease of LBW is inconsistent with other studies 1,14,24. This finding could be attributed to the deterioration in health services during gulf wars and economic sanctions 11,33. Recently, Abdul latif et al 12 reported that ANC have no association with birth weight.

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