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PREVELENCE OF LOW BIRTH WEIGHT AT DISTRICT HOSPITAL PULWAMA (Kashmir) IN A DEFENITE PERIOD OF TIME

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ABSTRACT

Low birth weight has been defined internationally as a birth weight of less than 2.5 KG measured during the first hour of birth. Incidence of low birth weight varies widely between regions of the world. India, the second largest populated country after china reports the incidence from 20-26 %., the present study was taken at one of the district hospital of Kashmir, India to see the prevalence of LBW over a fixed period of time. This is a level IV prospective study conducted at the district hospital for the period of three months (from January 2014 to April 2014).Total of one hundred and fifty two deliveries took place during this period .All mothers were analysed for the age group, education level, family income and nutritional supplement status during pregnancy. The weight of baby was taken during first hour of birth by standard paediatric weighing machine without covering the infant in towel. The association between various parameters was analysed. The age group was between 22 years to 37 years. The educational status was mostly up to under graduate level .Average monthly income was 1400 INR (range 4400 to 22000). Out of forty LBW babies born during the study period, twenty four were born in the families with income group of less than 10,000 per month. The percentage of LBW was 45% among the income group of <10,000 as compared to 17% in the income group of > 10,001. The p value was less than 0.05 and was statistically significant. Thirty two lbw babies were born in the gestational age group of less than 37 weeks and four were born in the gestational age group of more than 37 weeks. The results are statistically significant and are comparable with other studies.The study reveals that proportion of LBW is still high in the developing world. Significant relationship was demonstrated between LBW and other factors like age, socioeconomic status, gestational age and educational status. Despite the preventive measures taken by the government from time to time, the proportion of LBW is still high. A large scale nationwide study should be conducted to see the LBW babies in district hospitals and the rural areas.

INTRODUCTION

Low birth weight has been defined internationally as a birth weight of less than 2.5 KG measured during the first hour of birth [1]. Incidence of low birth weight varies widely between regions of the world. WHO estimates that globally about 25 million lbw babies are born each year, consisting 17 percent of all live births, nearly 95 percent of

them in developing countries [2]. India the second largest populated country after china reports the incidence from 20-26 %. LBW is broadly classified into Pre-term baby or small-for-date baby. Pre-term are babies born too early, before 37 weeks of gestation. The causation is multifactorial including multiple births, acute infections, hard physical work, hypertensive disorders of pregnancy etc [3].

However small-for-date baby is born at term or pre-term. They weigh less than the 10th percentile for the gestational age. These babies are the result of retarded intrauterine foetal growth. Interrelated factors responsible for IUGR are maternal factors including malnutrition, severe anaemia, heavy physical work during pregnancy, hypertension, malaria, toxaemia, smoking, low economic status, short maternal stature, very young age, high parity, close birth spacing and low education status [4]. The placental causes include either insufficiency or abnormality. The foetal causes include foetal abnormalities, intrauterine infections, chromosomal abnormality and multiple gestations.

Whatever be the cause, the LBW babies are associated with high mortality and morbidity. It also impairs their cognitive development during early childhood and predisposes them to risk of chronic diseases like hypertension, diabetes, coronary heart disease and stroke in adulthood [5-7].

More than half of the Indian LBW babies are born full term. The initiative "health for all" by the year 2000 taken by government of India was meant to decrease the incidence to 10%. Over years the main attention has been given to ways and means of preventing LBW through good prenatal care and intervention programmes , rather than ''treatment'' of LBW babies born latter.

Genetic and environmental factors also play role in LBW, as Kashmir is genetically and environmentally different from rest of India, the present study was taken at the district hospital of pulwama, Kashmir, India to see the prevalence of LBW over a fixed period of time. Also the women folk in this region are involved in farming, causing more burdens over the pregnant mothers .No such study has been taken so far in the region to the best of our knowledge.

MATERIAL AND METHODS

This is a level IV prospective study conducted at the district hospital Pulwama for the period of three months (from January 2014 to April 2014). All the women who delivered during this period were taken up for study. The referrals were excluded. Questionnaire was prepared and pre-tested and then approved by the ethical committee. Proper consent was taken from the patients and interview was conducted face-to-face. Total of one hundred and fifty two deliveries took place during this period. All mothers were analysed for the age group, education level, family income and nutritional supplement status during pregnancy. The weight of baby was taken during first hour of birth by standard paediatric weighing machine without covering the infant in towel. The association between various parameters was analysed.

RESULTS

152 patients were registered for the study. The age group was between 22 years to 37 years. The educational status was mostly up to under graduate level. Average monthly income was 1400 INR (range 4400 to 22000) Table 1 shows the age group. Table 2 educational status, Table 3 monthly income and Table 4 gestational age of all the patients.

Table 1 showing age group.

Among the 152 patients, the majority of pregnant ladies were under the age group of 26 – 30 years (n=68).Which is higher as compared to other studies. The reason may be the late marriage in the study group. As far the educational status is concerned, ninety one patients had completed education up to undergraduate level and thirty had completed their graduation. Besides (n=8) had post graduation as their highest qualification which included the professional courses. Only 15% (n=23) in our study where illiterates.

Family income was more than 10,000 per month in 99 patients. Out of forty LBW babies born during the study period, twenty four were born in the families with income group of less than 10,000 per month. The percentage of LBW was 45% among the income group of <10,000 as compared to 17% in the income group of > 10,001. The p value was less than 0.05 and was statistically significant.

Gestational age of 70 % (n=107) females was more than 37 weeks while as 30% (n=45) delivered before the 37 weeks of pregnancy. Thirty two lbw babies were born in the gestational age group of less than 37 weeks and four were born in the gestational age group of more than 37 weeks. The results are statistically significant and are comparable with other studies.

Weight of mother: Thirty eight patients had weight of less than 45kgs, 85 were between 45-55kgs and 29 weighed more than 55kgs at the time of interview. However serial weights during the different stages of pregnancy were not taken as study period was small (3 months).

Table 1. Level of education

Educational status	Number(152)	Percentage
Under graduate	91	60%
Graduate	30	20%
Post graduate	8	5%
Illiterate	23	15%

Table 3. Gestational age vs LBW

Gestational age in weeks	No. of patients	Lbw (weight <2.5 kg)
<37 weeks	30% (n=45)	N=32
>37 weeks	70%(n=107)	N=4

Fig 1. Age group

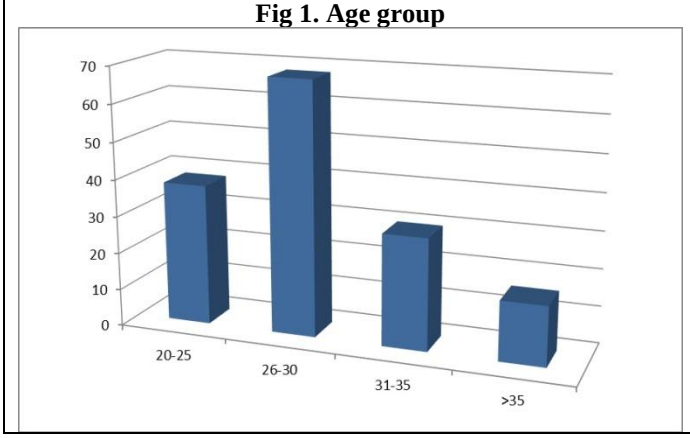
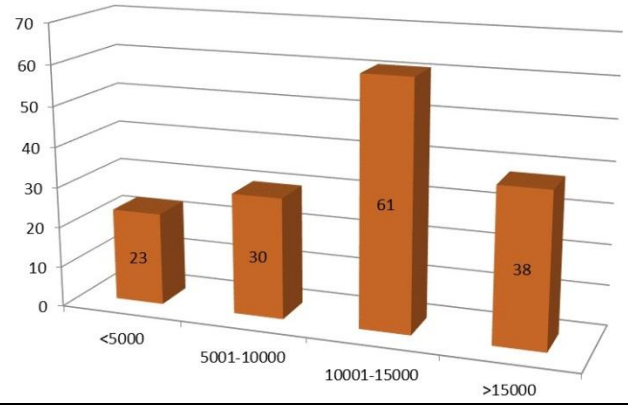


Fig 2. Family Income



DISCUSSION

For the healthy child, healthy mother is important. This dictum holds true during and after pregnancy. A prosperous nation is always dependent on the healthy child. Developing countries like India have been striving hard for the health of their children and want their children to be disease free. Among the 26 million LBW babies born annually, 95% are born in developing countries. In contrast to the 17% global annual incidence of LBW, India has an incidence of 20-26%. Our results are on the higher side of this range (26.31). No previous study is available from the region for direct comparison. Bangladesh, the neighbouring country reports the incidence of 31.2 % [8] and 45.54 [9] from the two different institutes.

The younger age group (20-25 years) had 45% (n=18) LBW babies. The results are comparable to other studies [9].

Family income as the associated factor for LBW is well mentioned in literature and the same is confirmed here. ($p<0.001$)[8, 10-12].

Most of the mothers were taking the balanced diet and were also taking Iron and Folic acid supplementation. The institute is providing free health care facility to the pregnant women under national rural health mission programme. Majority of the patients were from well off families. No associated parameters in food habits were encountered. Smoking, which is an important factor for LBW [13-15] was not seen in this study group. The reason could be the 100% Muslim population or their reluctance in revealing such history. Same is true for alcoholism.

Gestational age of less than 37 weeks was associated with high incidence of LBW. The results are comparable to other studies [16-18].

CONCLUSION

The study reveals that proportion of LBW is still high in the developing world. Significant relationship was demonstrated between LBW and other factors like age, socioeconomic status, gestational age and educational status. Despite the preventive measures taken by the government from time to time, the proportion of LBW is still high. A large scale nationwide study should be conducted to see the LBW babies in district hospitals and the rural areas. Only then the preventive measures can be implemented and national policies upgraded.

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