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EVALUATION THE RATE OF LBW (LOW BIRTH WEIGHT) IN TERM OF PREGNANCY AND TO FIND OUT DIFFERENT LINKED FACTORS OF RISK

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Abstract:

Objective: *This research work aimed to find out the rate of LBW (Low birth weight) in term pregnancy and to find out different linked factors of risk.*

Methodology: *This was a transverse research work carried out in Gynecology Department of Nishter Hospital Multan. This research work started in March 2017 & finished in September 2018. Identification of females with pregnancy with single baby inside her of thirty seven or above close to complete weeks of gestation carried out. The females who delivered children with lower than twenty five hundred gram were the part of this research work. We evaluated the risk factor for low weight babies in all these females. Questionnaire was in use to note down the age of female, parity of female, weight & height of female, gender of fetal, social & economic status, habit of cigarette smoking & birth weight of baby. SPSS was in use for the statistical analysis of the collected information. Determination of rate of LBW and its linked factors of risk performed.*

Results: *In the duration of this research work, 10.60% females gave birth low weight babies. Sixty seven percent patients did not receive antenatal care. We found the parity as lower than 3 in eighty seven percent females. In twenty five percent cases, the weight of mother was less than fifty kilograms & in 37.0% patients with LBW, height of mother was less than 5 feet. Most of the females were anemic (72.0%) including 20.0% with hemoglobin less than 7.0 grams.*

Conclusion: *LBW has association with a complete group factors. These risk factors contained lower social and economic condition, anemic, prim-parity, low height of mother & less than average weight of mother.*

KEY WORDS: *Average, LBW, hemoglobin, parity, association, determination, methodology, risk factors, fetal.*

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INTRODUCTION:

Baby weight depends on the pregnancy duration and amount of the development of fetal inside uterus. The new babies may be proper according to pregnancy duration but with small size due to preterm birth. The babies with small weight may born term or preterm. A newborn is small for pregnancy duration when sex particular weight at the time of birth is less than tenth percent for proper pregnancy duration. About seventy percent babies with low weight at the time of birth are low small because of various constitutional features. Small for pregnancy duration may be because of pathological ca causes when it has restriction in the development in intrauterine. There are three groups according to World Health Organization [1], small babies for pregnancy duration, proper for the criteria of pregnancy duration and babies with LBW are those having less than 2500 grams weight within twenty four hours of birth.

There is very high perinatal morbidity as well as mortality in this group of babies. This great risk is due to the reality that these children are available with increased risk of various infection, failure of development &malnutrition. These patients also have danger to bear development of abnormal cognitive, neurological abnormalities & adverse performance at school. They also suffer hypertension & diabetes mellitus in their adult life. In the whole world, mortality of neonates in twenty times high likely for babies with LBW in comparison with the babies having more than 2500 grams of weight at the time of birth [2]. There is an estimation that seventy two present infants with LBW are present in Asia [2]. In or country Pakistan, the prevalence of this issue is from 12.0% to 25.0% [3].

METHODOLOGY:

This was a transverse research work conducted in Gynecology Department of Nishter Hospital Multan from March 2017 to September 2018. The females with singleton pregnancy available with at least thirty seven week of pregnancy duration were the part of this research work. Females suffering from any other serious disorders as diabetes, hypertension, kidney diseases, diabetes, heart or lungs complications or during pregnancy hemorrhage were not the part of this research work. All females who gave birth in the duration of this research work and meeting the inclusion standard were the part of this research work. We took written consent from all participants. Different variables as age of female, her parity, weight & height of mothers, total family income, hemoglobin, weight at time of birth, gender of fetal noted down on questionnaire.

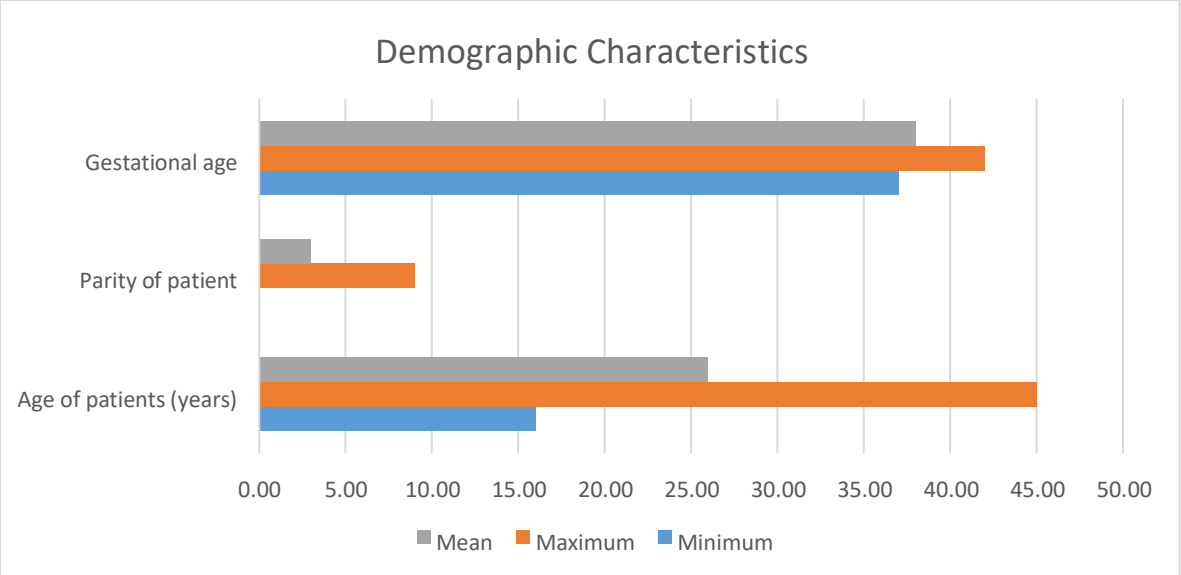
Just after birth, weight measurement of babies carried out on scale in one hour after their delivery. The babies were present with normal weight if their weight was within 2500-4000 grams, low weight was lower than 2500 grams and macrocosmic if greater than 4000 grams. If Hb was greater than ten g/dl then there was no anemia, anemia was mild to medium if Hb was from seven to ten g/dl &anemia of severe nature was present if Hb was lower than seven g/dl. SPSS V. 15 was in use for the statistical analysis of collected information. The calculation of quantitative variables carried out with average ± standard deviations. The calculation of categorical variables carried out with the help of frequencies.

RESULTS:

Nine hundred and seventy one singleton births at term were the part of this research work. We found the less than 2500 grams weight in one hundred babies. The average age of the patients was 26 years. Most of the patients (82.0%) were twenty to thirty ear of age (Table-1).

Table-I: Demographic features. (n=947)

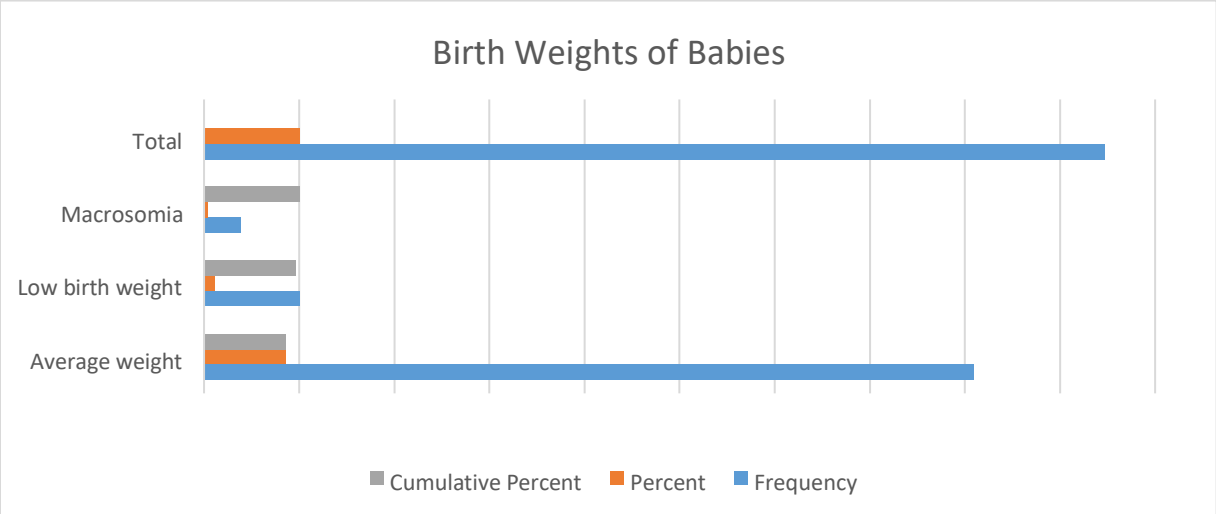
Demographic features	Minimum	Maximum	Mean	± SD
Age of patients (years)	16.00	45.00	26.00	±5.1000
Parity of patient	0.00	9.00	3.00	±1.9870
Gestational age	37.00	42.00	38.00	±1.2250



In females, who delivered babies with lower than 2500 grams, most of females (67.0%) were non-booked. Average pregnancy duration at the time of birth was thirty eight week. Majority of patients (87.0%) found with parity lower than 3 consisting 54.0% prim-gravida. The mean weight of total babies was 2915grams. The rate of the low weight at the time of birth was 10.60 %(Table-2).

Table-II: Birth weight of baby.

Birth Weight	Frequency	Percent	Cumulative Percent
Average weight	809.0	85.40	85.40
Low birth weight	100.0	10.60	96.00
Macrosomia	38.0	4.00	100.00
Total	947.0	100.00	

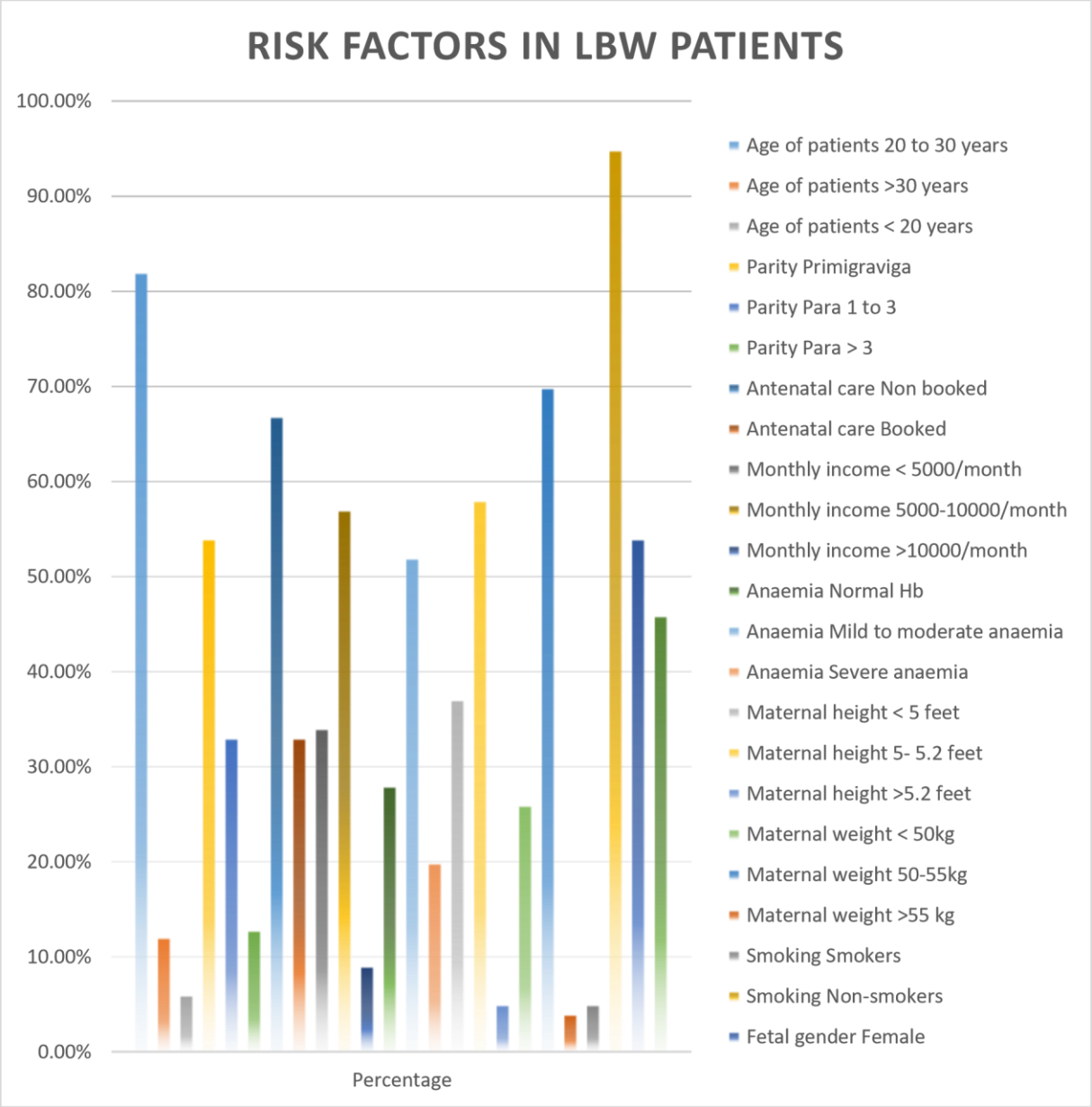


Various risk factors for the group with LBW are available in Table-3. Maternal anemia was available in LBW patients (72.0%).

Maternal hemoglobin was lower than seven in 20.0% patients. Only 5.0% patients were addict of smoking. Majority of patients with LBW were from group of ow income (91.0%). The height and weight of mother were also available as important risk factors. The height of female was lower than five feet in 37.0% &weight was lower than fifty kilogram in 26.0% patients. There was dominancy of female sex in the group of LBW with 54.0%.

Table-III: Risk factors in patients with LBW.

Risk Factors		Percentage
Age of patients	20 to 30 years	82.00%
	>30 years	12.00%
	< 20 years	6.00%
Parity	Prim gravida	54.00%
	Para 1 to 3	33.00%
	Para > 3	13.00%
Antenatal care	Non booked	67.00%
	Booked	33.00%
Monthly income	< 5000/month	34.00%
	5000-10000/month	57.00%
	>10000/month	9.00%
Anemia	Normal Hb	28.00%
	Mild to moderate anemia	52.00%
	Severe anemia	20.00%
Maternal height	< 5 feet	37.00%
	5- 5.2 feet	58.00%
	>5.2 feet	5.00%
Maternal weight	< 50kg	26.00%
	50-55kg	70.00%
	>55 kg	4.00%
Smoking	Smokers	5.00%
	Non-smokers	95.00%
Fetal gender	Female	54.00%
	Male	46.00%



DISCUSSION:

The birth weight of baby shows the health of mother in the period of pregnancy. Development of baby in uterus normally determined by mother, fetal and placental features. The weight of baby at the time of birth has relation with the weight at the time of birth of both parents especially through line of mother [4]. Females whose birth was with low weight have an increased risk of delivering babies with LBW. In a multiple analysis work, an important association was available low weight at the time of birth & abuse [5]. Abuse has association with the low social & economic condition, low weight of mother, anemia, unbalanced diet and psychological morbidities. The danger of LBW concluded as 4.10 times greater in females who are using the products of tobacco. Not only the smoking of cigarettes but chewing of tobacco is an important risk factor of LBW [6].

The rate of LBW was 15.0% to 30.0% in the countries of South Asia [7]. The LBW proportion as stated from India is 21.50% [8] to 26.80% [9]. The data in the nutritional survey reports the rate of 12% to 25% in our country Pakistan [3]. The prevalence of LBW was very high in the mothers having teen age i.e. 65.520% [10]. Viengsaahone concluded very young age of mother as an important risk factor for LBW with odd ratio 8.60, 95.0% confidence interval = 2.40-30.70

[11]. Rizvi concluded the high danger of LBW with the increase in age of mother [12]. In recent research work, prim-parity was available in 54.0% patients with LBW which is very much similar with the report of Kozuki [13]. A research work from New Zealand concluded he mothers of LBW were smaller & stated low weight before pregnancy in comparison with the mothers of normal healthy infants [14]. Zhen Han concluded that females with less weight had very high danger of having babies with LBW [15]. There is also an increased risk of LBW in neonate in females with less height [16].

Lin-Lin–Dal concluded greater prenatal visits can decrease danger of LBW [17]. Kotelchuck [18] concluded an associate danger of LBW as 1.470 in patients with improper visits. Kayode concluded a high prevalence of babies with LBW in females living in non-urban areas with less supply of safe water [19]. Most of the females were from low social and economic class as reported by Sharma [20]. Badshah stated the high prevalence of LBW babies among mothers suffering from anemia [21]. Lone [22] stated the danger of LBW babies in anemic people is 1.90 time greater in our country Pakistan.

CONCLUSION:

There are many identifiable factors among females with high danger of babies with LBW at the time of delivery. Adverse social and economic condition, anemia, height &weight of mother are very important factors linked with the low weight at the time of birth. The rectification of anemia, utilization of balanced diet, use of antenatal care are the expectations to decrease the rate of babies with low weight at the time of birth and reduce the rate of perinatal mortality.

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