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Research Article

**IMPACT OF OBESITY ON PREGNANCY AND ITS
CONSEQUENCES**¹Dr Ahmed Farhan Ghouri, ²Kashif Usman Ahmad Khan, ³Dr Maryam Amin¹Medical Officer, Cardiac Complex BVH Bahawal Pur²BHU Fazal Wah, Vehari³Nishtar Institute of Dentistry Multan

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Abstract:

Objective: This case work aimed to discover and evaluate the obesity's impact on pregnancy as well as outcome of pregnancy and compare this with the pregnancy outcome of normal non-obese females. **Methodology:** This was a transverse research work carried out in Ganga Ram Hospital, Lahore. This research started in August 2017 and finished in August 2018. Total 412 females with high and normal body mass index were part of this research work in three months on pregnancy period. Follow up of the patients carried out on regular basis as well we investigated the pregnancy. We recorded the complication faced by the participants of both groups. The relative rates of complication due to pregnancy as diabetes during gestation period, hypertension, and labor induction were under comparison among the participants of both groups. We also recorded the delivery mode as well as weight of fetal.

Results: The rate of pregnancy complicated hypertension, cesarean surgery, diabetes and high weight of fetal were very high in females who were suffering from obesity in comparison with normal females with pregnancy.

Conclusion: Obese females with pregnancy are present with high danger for the complications of pregnancy as well as labor. It is very necessary to get normal body mass index before plan pregnancy.

KEY WORDS: Complication, obesity, necessary, hypertension, cesarean, body mass index, fetal, comparison, relative.

Corresponding author:**Dr. Ahmed Farhan Ghouri,**

Medical Officer, Cardiac Complex BVH Bahawal Pur

QR code



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INTRODUCTION:

Obesity is very serious issue of health in the whole world. The occurrence & prevalence are increasing progressively in the whole world. The people of undeveloped countries as well as developed ones are at high risk of this complication. In United States of America, the range of its prevalence from 18.50% to 38.30%, making this complication as a very common increased risk obstetric condition [1]. A study conducted in Australia concluded that 34.0% females with pregnancy were available with high BMI [2]. In accordance with a research conducted in west stated that 28.0% females with pregnancy are overweight & 11.0% pregnant females are obese [3]. In comparison with the females with normal body weight, females with obesity are present with high danger of obtaining certain problems in the duration of pregnancy period, during the period of labor & in the period after delivery.

Very common complications during the period of pregnancy are hypertension diabetes during pregnancy period, preeclampsia [4], thromboembolism, labor induction [5], and hemorrhage after delivery & infections of the urinary tract. The high weight of females has a relation with the increased risk of cesarean sections and a high prevalence of anesthetic & complication after surgeries in such deliveries. Females with obesity are the victims to face high risks of puerperal infection & less rates of continuation of the breastfeeding. The obesity of the mother increases the perinatal rate of mortality [6]. It has the ability to higher the danger of perinatal mortality as well as birth before complete duration of pregnancy [7]. The dangers are less Apgar scores, dystocia of shoulder, macrosomia, instrumental, difficulty in breastfeeding, defects of neural tube & trauma in neonates. These issues are very common in the infants of females with obesity in comparison with the females having normal BMI [8, 9].

Prenatal as well as postnatal care are high for females who are overweight in comparison with the females having normal weight and mostly newborns of obese mothers need admission to the ICU of neonates as compared to the infants of normal weight females. Such newborn are at increased danger for having congenital abnormalities or being stillborn [10]. Obesity of females has an association with high danger of mortality rate of neonates. The association of this complication with the death of infant, infant death due to specific reason & post neonatal mortality are not

available with well characterization [11]. The purpose of this research work was to detect and evaluate the impact of obesity on pregnancy & pregnancy outcome due to this issue as well as comparison with the normal healthy females.

METHODOLOGY:

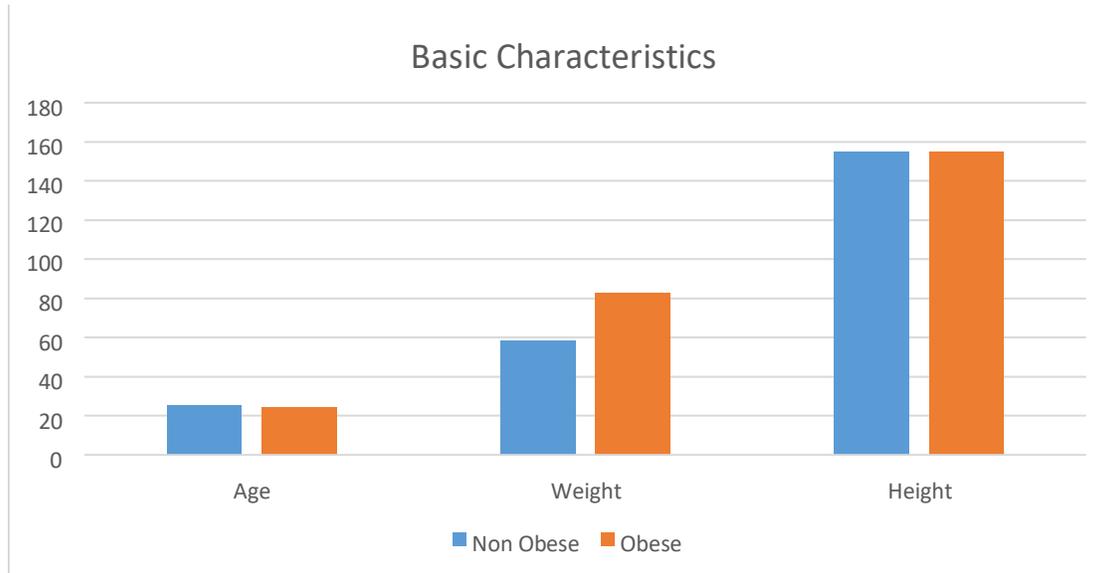
This was a transverse research work conducted in Ganga Ram Hospital, Lahore from August 2017 to August 2018. Females visiting the hospital for antenatal care in the period of 1st trimester of their pregnancy and who gave their consent to visit for complete follow up in the complete pregnancy period were the part of this research work. All the pregnant females gave verbal consent to participate in the research work and we explained the aim of this research work to all the participants. We collected the obstetric information of four hundred and twelve females with pregnancy with parity from 0 to 5 from initial visit to delivery containing the past examination outcomes, pregnancy duration at the time of delivery, delivery mode, baby weight & data about stillbirths. We also recorded the complications as diabetes, hypertension & labor induction. We noted the height and weight of the patient to measure the body mass index of females. We calculated BMI at the very first visit of the pregnant females. Obstetric consequences as labor type induced or spontaneous or, delivery type as normal through vagina or cesarean section or instrumental and baby weight at the time of birth recorded. The outcome of delivery as well as fetal was in record. Females with pregnancy who were available with serious complications as heart diseases of confirm appearance of cesarean delivery were not the part of this research work. The division of females carried out in 2 categories normal females having body mass index lower than twenty five and obese females with body mass index of greater than twenty five. T test was in use to compare the quantitative variables. SPSS V. 17 was in use for the statistical analysis of the collected information.

RESULTS:

There were total four hundred and twelve females in this research work. Out of these, 70.80% (n: 292) females were available with normal weight of body and 29.10% (n: 120) females were obese. Table-1 is available with the basic traits of the patients & Table-2 displays the danger of every complication in the anomalous body mass index categories as compared to the normal healthy females.

Table-I: Basic characteristic of patients.

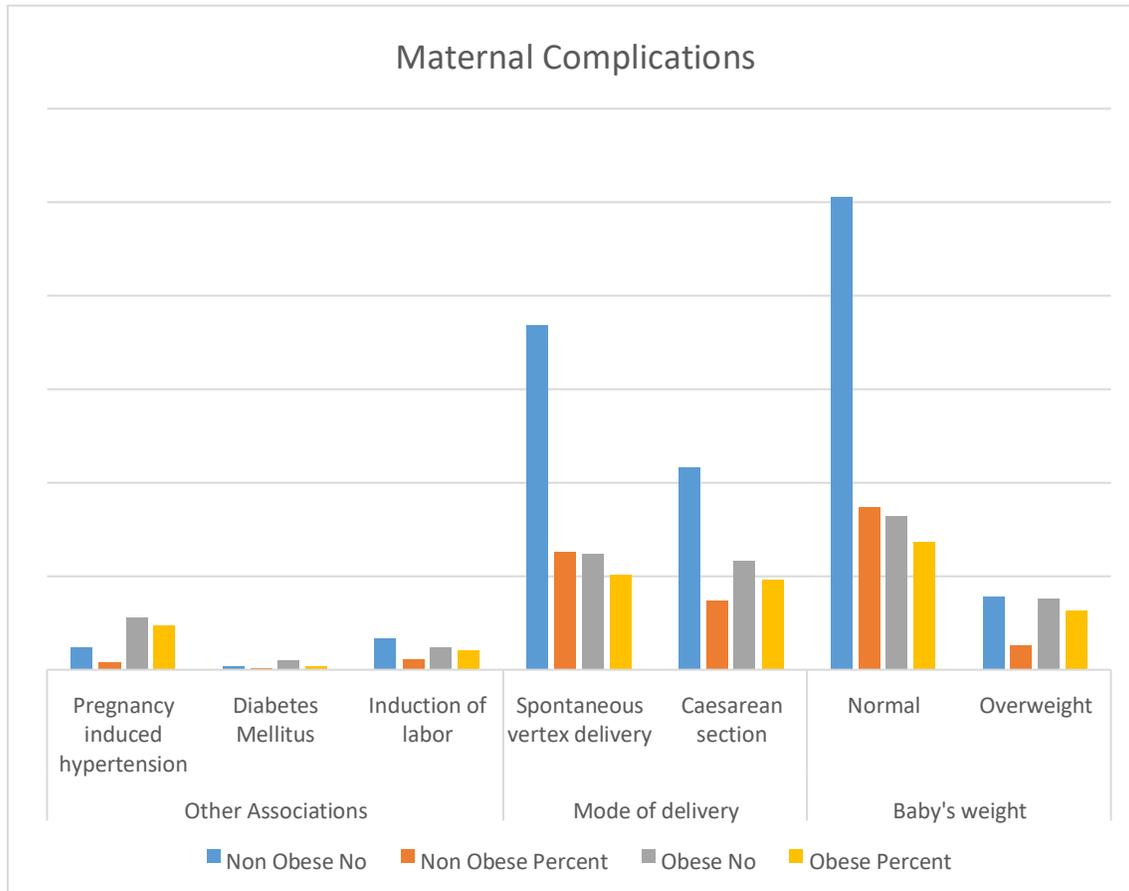
Basic Traits	Non Obese	Obese	P-value
Age (years)	25.30 ± 5.00	24.30 ± 2.80	0.0030
Weight (kg)	58.00 ± 4.00	83.00 ± 5.00	0.0100
Height (cm)	154.8	154.8	0.0100



This recent research work displays the important disparity in the occurrence of hypertension due to pregnancy, gestational diabetes, caesarean surgery and high weight of fetal in women suffering from obesity as compared to the females with normal healthy weight. Whereas we were unable to determine any disparity in the rates of labor induction in the members of both groups.

Table-II: Maternal complications, mode of deliveries and baby's weight.

Complication		Non Obese		Obese		Pvalue
		No	Percent	No	Percent	
Other Associations	Pregnancy induced hypertension	12.0	4.10	28.0	23.30	0.0100
	Diabetes Mellitus	2.0	0.60	5.0	1.70	0.0130
	Induction of labor	17.0	5.80	12.0	10.00	0.1320
Mode of delivery	Spontaneous vertex	184.0	63.00	62.0	51.00	0.0300
	deliveryCaesarean section	108.0	36.90	58.0	48.00	
Baby's weight	Normal	253.0	86.60	82.0	68.30	0.0100
	Overweight	39.0	13.30	38.0	31.60	



DISCUSSION:

The occurrence of obesity in this current research work was about 29.0% which is very less in comparison with other research works. A research work conducted in a public hospital of Karachi stated that 47.0% females of more than thirty year of age are obese [12]. We discovered that females with obesity are available with high risk in comparison with the females who have normal weight of body to hypertension due to pregnancy, diabetes in the pregnancy period, preeclampsia, cesarean section & macrosomia. These results are very much similar to the findings of research works conducted in past [6, 13, 14]. Sherrord also quoted the high increase in cesarean sections because of less cervical dilatation rate and increase in the soft tissues in pelvis of mothers causing obstructed labor or disproportion of cephalo-pelvic.

In comparison to many other authors stating a high rate of induction of labor in females with obesity, we were unable to find an important disparity. This was because of small sample size of this research in comparison with other case studies. Obesity has an association with the macrosomia causing the potential of bad maternal consequences with intervention and adverse

outcome of neonate from dystocia of shoulder as injuries at the time of birth as nerve palsies. High average weight at the time of birth & macrosomia was available in our pregnant females with obesity which is much consistent with research works conducted by many other scholars [15, 16]. There are some limitations of this research work as this research work contained small sample size and this research work included only willing females attending the OPD of only one hospital. But still this research work increases a lot in the evidences that obesity as calculated by body mass index, inclines females to very high risk of deliveries with the help of cesarean section & hypertension due to pregnancy, diabetes in the period of gestation and a high danger of having babies suffering from macrosomia. The management of such complications and decreasing the incidences of these issue are a serious challenge for the care providers in the field of obstetric.

CONCLUSION:

The findings of this research work conclude that obesity is accountable for high risk of complications in the complete duration of pregnancy and outcome of delivery and fetal. Nutritional counseling after the

delivery is very necessary for such females. It is very necessary to gain normal BMI before planning for babies.

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