



MORBIDITIES ASSOCIATED WITH INCREASED BMI IN PREGNANT WOMEN.

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ABSTRACT... Obesity is the major threat to social and medical wellbeing in Pakistan and worldwide. Increased BMI poses certain risks to mother as well as fetus. The objective of this study is to assess the maternal and fetal morbidities in women presenting with increased BMI during pregnancy. **Study Design:** Descriptive cross sectional study. **Setting:** Isra University Hospital. **Period:** 1st June 2017 till Nov 2017. **Materials and Methods:** 100 Patients with singleton pregnancy were included in this study. **Results:** Total 100 female patients were taken in this study and it was observed that 67% of them were in age limit between 21-30, 27% were above 31 yrs old and only 6% were found to be below 20 yrs. Amongst them 34% were diabetics, 29% hypertensive, 10% had UTI, 7% were suffering from asthma and remaining 10 % had multiple problems. **Conclusion:** It was concluded that there are complex and noteworthy socio- statistic imbalances related to different age groups, parity status and BMI. It was also concluded that increased no of patients are at high risks of maternal and fetal complication rates and require proper access to antenatal care. Facilities and interventions should be provided to improve both maternal and fetal health care and reduce the risks of adverse effects of increased BMI.

Key words: Birth Outcomes, BMI, Diabetes, Fetal Health, Maternal Health, Obesity

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INTRODUCTION

Obesity has been the universal focus for today's world since past 25 years and expected to remain so for predictable future for developed and underdeveloped countries.^{1,2} A huge list of factors like sedentary lifestyles, dependence on technologies, over consumption of high calorie low quality fats, alcohol, diminished physical activity, environmental influences have found to be contributory to obesity by creating dysregulation in body metabolism.³ It is usually depicted utilizing the body mass index (BMI = kg BW/ height in m²). WHO discern between overweight (BMI 25–30 kg/m²), obesity (BMI > 30 kg/m²) and extreme obesity as (BMI > 40 kg/m²)².

Maternal weight is presently viewed as a standout amongst the most normally happening hazard factors seen in obstetric practice. Obese women have shown increased chances of complications like miscarriages, gestational diabetes, preeclampsia, venous

thromboembolism, induced labour, caesarean section, anaesthetic complications and wound infections, breastfeeding in contrast to healthy pre pregnancy weighted. Not only that, but childrens born to obese patients have also shown increased possibilities of stillbirth, congenital anomalies, prematurity, macrosomia and neonatal death.

In United States alone more than one third of the women are found to be obese⁵, uk showed rapid increase from 9% to 16% and in Netherlands up to 42% incline in obesity rate.⁶

Considering the facts that people are consuming more and moving less throughout the world along with rapid rise in complications both maternal and fetal, this study was felt to be of deemed importance to assess the maternal and fetal morbidities associated with increased BMI during pregnancy.

METHODOLOGY

This study was conducted at Isra University Hospital during time period of 1st June 2017 till Nov 2017. 100 Patients with singleton pregnancy were included in this study.

RESULTS

Total 100 female patients were taken in this study and it was observed that 67% of them were in age limit between 21-30, 27% were above 31 yrs old and only 6% were found to be below 20 yrs old (Table-I). Amongst them 34% were diabetics, 29% hypertensive, 10% had UTI, 7% were suffering from asthma and remaining 10 % had multiple problems (Figure-1). Fetal complications were absent in about 63% of patients while 15% has macrostomia, 14% low birth weight, 6% IUGR and 2% suffered from congenital abnormalities (Figure-2). 30% were primary gravida, 24% had NVD, 6% had both NVD and C- section while 40% had section (Figure-3).

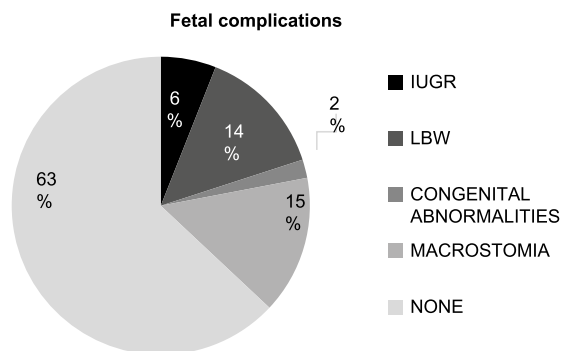


Figure-2

Mode of deliveries in previous pregnancies

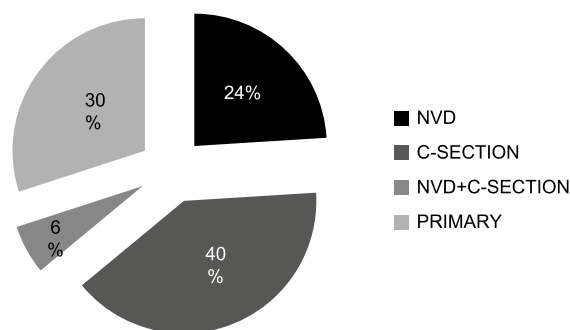


Figure-3.

Age N (%)	Below 20 Yrs	21-30 Yrs	Above 31 Yrs	Total
	06 (6%)	67 (67%)	27 (27%)	100 (100%)
Trimester	1 ST	2 ND	3 RD	
	19	38	43	100
BMI	Normal (18-25)	Over weight (>25)	Obese (>30)	V.Obese
	34	45	17	4
Parity Status	PRIMI Gravida	2 ND	3 or >	
	30	28	42	100

Table-I. Socio-demographic data of included population

Maternal Morbidities

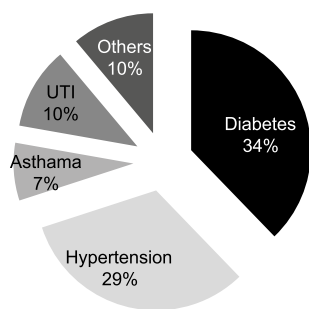


Figure-1.

DISCUSSION

In our study out of 100 patients, 67% fall into age limit of 21-30 yrs while 27% were above 30 yrs old. 6% were also found to be below 20 yrs of age. 19 patients were in their first trimester, 38 in 2nd while 43 in their 3rd trimester. According to BMI 5 pt were underweight, 32 had normal BMI, 45 overweight, 17 obese whereas 4 were very obese. Analyzing parity status in our study, it was found that 30 were primi gravid, 28 has their second pregnancy while 42 pt had 3rd or more. Comparing with another study out of 100 patients 68 of non-obese pregnant and 60 of obese pregnant women were of 20 - 25years group, 24 of non-obese women and 12 of obese women were of 26 - 30 years group, 8 of non-obese pregnant and 28 of obese pregnant group women were of 31 - 35 years group.⁷ Another study found their BMI status according to 1st, 2nd, and 3rd trimester to be 56.9% & 55.4% normal BMI (1& 2 trimester), 25.4%,27.1% & 31.8 % over weight, 14.3%, 14.6% & 18.2% obese.

Similarly the same study found parity status 36.4%, 34.2% % 32.6% having their first pregnancy with %ages in 1st, 2nd and 3rd trimesters. 2 parity had 16.7%, 17.5%, 15.1% while 3+ parity having 10.4%13.2% 12.1%¹¹

In our study it was found that 34% of pregnant patients had gestational diabetes, 29% had hypertension, 7% suffered from Asthma, 10% from UTI while 10% had other maternal morbidities. Comparing these results with another study, GDM was found in 6.9% and hypertension in 8.0%⁸ of patients where as another study found GDM in 1.3%, 6.2% hypertension and 3% had asthma.⁹

In our study it was concluded that 15% of patients had IUGR babies, 14% LBW, 6% had macrostomia, 2% had other congenital abnormalities while 63% had none of the fetal complications. Comparing these results with other studies, reported 1.9% macrostomia, 0.3% IUGR⁸ another study found macrostomia in 11.7%⁹ whereas still another study reported IUGR ratio to be in 20% of patients.¹⁰

Again comparing our results for mode of deliveries in previous pregnancies with other study, we found that 24% had NVD, 40% had c- section, 6% had both mode of deliveries NVD and c- section while 30% were primaries where as other study shows that 47.9% had NVD, 20% had elective C-section and 23.9% had emergency c-sections.¹⁰

CONCLUSION

It was concluded that there are complex and noteworthy socio- statistic imbalances related to different age groups, parity status and BMI. It was also concluded that increased no of patients are at high risks of maternal and fetal complication rates and require proper access to antenatal care. Facilities and interventions should be provided to improve both maternal and fetal health care and reduce the risks of adverse effects of increased BMI.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Sarwat Memon	Conceived data, data collection, Analysis, Data input, Editing wrote article.	