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Maternal obesity and its impact on pregnancy outcome

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Abstract
To assess the effects of obesity on pregnancy and to compare it with non-obese patients. Obesity is a worldwide epidemic that will reach over one billion people by 2030. Women who are overweight or obese during pregnancy face several health risks. Obesity is becoming increasingly prevalent in Indian population and has become one of the most commonly occurring risk factors in obstetric practice. Pregnant women who are obese are at greater risk of a variety of pregnancy related complications compared with women of normal BMI.

Keywords: obesity, fetal and maternal complications, epidemic, BMI

1. Introduction
Obesity is a worldwide health problem that has adverse effects on pregnancy and its outcome. Obese and overweight women have higher risks of having pregnancy induced hypertension [4], diabetes mellitus, still births, caesarean deliveries as well as post partum complications including post partum haemorrhage and post operative infection [5].
Obesity increases the risks of adverse fetal outcomes like fetal macrosomia and shoulder dystocia, neonatal trauma and feeding difficulties. Maternal obesity is also associated with increased risk of neonatal death[6]. Prenatal and post natal care is also higher in obese mothers than for normal weight mothers. The need for admission to neonatal intensive care units is more frequent in obese mothers as compared to non obese mothers [7].
The aim of our study is to assess the effects of obesity on pregnancy and to compare it with non obese patients.

2. Material and Methods
Case under study involves 212 women at Govt. Hospital, Jammu and Kashmir. Women coming for antenatal care during first trimester and who were willing to come for follow up throughout pregnancy were included in the study. Verbal consent was taken from all women and purpose of study was explained. Obstetric data of 212 pregnant women with a parity of 0-5 were collected from booking till delivery, mode of delivery, weight of baby and record of still birth was noted. Complications such as Diabetes mellitus, pregnancy induced hypertension and need for induction of labour were noted. BMI was noted initially at booking and was used for study. Obstetric outcomes like type of delivery i.e. spontaneous, vaginal, instrumental or caesarean section and weight of baby was recorded.

Table 1

	Non obese	Obese	P value
Age	26.3± 5	25.3 ±3.8	0.003
Weight	56 ±4	81± 5	0.01
Height	155.6	155± 6	0.01

The patients who were excluded from the study were patients with cardiac diseases, twins, absolute indication for Lscs and essential hypertension.

3. Results
A total of 212 women were included in the study. Of these 70.8% have normal weight and 29.2% were obese. The basic characteristics of patients are shown in table 1 and table 2 shows the intervention in obese patients, abnormal BMI categories and risk associated with each complication. Our study shows that there is significant difference in the prevalence of pregnancy induced hypertension, caesarean section, diabetes mellitus and fetal macrosomia in women who are obese as compared to women of having normal weight.

Table 2

Complicatons	Non Obese	Obese	P Value
Diabetes mellitus	4.1%	23.3%	0.01
Pregnancy Induced Hypertension	0.6%	1.7%	0.013
Induction of Labour	5.6%	10%	0.132
Mode of delivery			
spontaneous vertex delivery	63%	51%	0.03
Caesarean Section	34.3%	48%	
Body Weight			
Normal	86.6%	68.3%	0.01
Overweight	13.3%	32.6%	

4. Discussion
We found that obese women were at increased risk of maternal and fetal complications like PIH, preeclampsia, gestational diabetes mellitus, caesarean section and fetal macrosomia. These findings are comparable to other studies [8, 9]. Obesity is known to be associated with macrosomia which leads to adverse maternal outcomes from obstetric intervention and adverse neonatal outcomes from shoulder dystocia causing birth injuries such as nerve palsies[10]. In USA, the incidence of obesity is 18.5% to 38.3% making it a high risk obstetric situation [11]. In our study, higher birth weight and fetal macrosomia was found which was comparable with other studies [12]. There is increasing

evidence that obesity which is measured by BMI predisposes a women to pregnancy induced hypertension, diabetes mellitus, increased risk of caesarean section and fetal macrosomia [13, 14]. Preconception counseling is an important aspect of good obstetric outcome [15]. pre pregnancy weight loss can be beneficial in reducing adverse maternal and fetal outcomes [16].

5. Conclusion

In conclusion, the results of our study suggests that obesity significantly increases the risk of maternal and fetal complications. Although encouraging a healthy diet and weight loss may improve the effects of obesity on pregnancy. Such patients should be advised for nutritional counselling, preconception counselling, proper prenatal management and long term follow up to minimize the pregnancy complications associated with obesity.

6. References

1. Kelly T, Yang W, Chen CS, Reynolds KJ. Global burden of obesity in 2005 and projections to 2030. Int. J Obes. 2008; 32:1431-37.
2. Bhattacharya S, Campbell BM, Liston WA. Effects of body mass index on pregnancy outcomes in nulliparous delivering singleton babies. BMC Public health. 2007; 7:168.
3. Kiran U, Hemmad S, Bethel J, Evans J. Outcome of pregnancy in a women with an increased body mass index. BJOG. An Int J Obstetrics and gynaecology 2005; 112(6):768-772.
4. Marshall NE, Spong CY. Obesity, pregnancy complications and birth outcomes. Sem. Rep Med. 2012; 30:467-71.
5. Junghein ES, Travieso JL, Carsson KR, Moley KH. Obesity and reproductive function. Obstet Gynaecol Clin North Am. 2012; 39-479-93.
6. Chen A, Ferusu SA, Fernandez C, Rogan WJ. Maternal obesity and the risk of infant death in united ststes. Epidemology. 2009; 20:74-81.
7. Castro LC, Avina RL. Maternal obesity and pregnancy outcome. Curr O Pin Obstet and Gynaecol. 2002; 14:601-606.
8. Kristensen J, Kestergaard M, Wisborg K, Kesmodel U; Secher NJ. Pregnancy weight and risk of still birth and neonatal death BJOG. 2005; 12:403-408.
9. Sebire NJ, Jolly M, Harris JP, Wadsworth S, Joffe M, Beard RW, *et al*. Maternal obesity and pregnancy outcome study of 287213 pregnancies in London. Int J O bes Relat Metal Disord. 2001; 25:1175-1182.
10. Callaway LK, Prins JB, Chang AM, Mcintyre HD. The prevalence and impact of overweight and obesity in an Australian Obstetric population. Med J Australia. 2006; 184:56-59.
11. Gross T, Sokol RJ, King KC. Obesity in pregnancy :risks and outcomes. Obstet Gynecol. 1980; 56:446-450.
12. Galtier- Dereure F, Boegner C, Bringer J. Obesity and pregnancy: complications and cost. Am J Cln Nutr. 2000; (Suppl):12425-12485.
13. Diabela D, Hanson RL, Lindsay RS, Pettitt DJ, Imperatore G, Gabir MM, *et al*. Intrauterine exposure to diabetes conveys risks for type 2 diabetes and obesity; a study of discordant sibships Diabetes. 2000; 49:2208-11.
14. Sherrard A, Platt PW, Vallerand Usher RH, Zhang X, Kramer MS. Maternal anthropometric risk factors for caesarean delivery before or after onset of labour. BJOG. 2007; 114:1088-1096.
15. Moss JL, Harris KM. Impact of maternal and paternal preconception health on birth outcomes usng prospective couples data in add Health. Arch Gynecol obstet 2015; 291:287-98.
16. Clark AM, Thornley B, Jomlinson L, Galletby C, Norman RJ. Weight loss in obese infertile women results in improvement in reproductive outcome for all forms of fertility treatment. Hum. Reprod. 1998; 113:1502-05.