ABSTRACT

TITLE: A retrospective study comparing the rate of gestational hypertension in obese women with BMI > 35kg/m2 who had primary caesarean section with women with normal BMI who had primary caesarean section: Cross sectional study.

DEPARTMENT: Department of Obstetrics and Gynecology, Christian Medical College, Vellore.

NAME OF CANDIDATE: Dr. Smitha Elizabeth Jacob

DEGREE AND SUBJECT: MS Obstetrics and Gynecology

NAME OF GUIDE: Dr. Jiji Elizabeth Mathews

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BACKGROUND: There has been an exponential increase in the prevalence of obese women worldwide. Increase in caesarean section rate among them is a major concern. Iatrogenic intervention for gestational hypertension without pre ecclampsia may contribute to increase in primary caesarean rate. This study looks at rate of gestational hypertension in two groups of BMI – normal 18.5-24.99 kg/m2 and BMI > 35 kg/m2 in women who had primary caesarean. The study also compares maternal and fetal outcomes in the 2 BMI groups.

OBJECTIVES:

1. To prove that obese women with BMI >35 kg/m2 who had primary caesarean section have higher rate of gestational hypertension compared to women with normal BMI who had primary caesarean section.

2. To compare the maternal and fetal outcomes in the two groups.
METHODS: The women who had primary caesarean were divided into two BMI groups of normal BMI 18.5 – 24.99 kg/m² and BMI > 35 kg/m². Patients whose BMI was available when less than 16 weeks of gestational age and delivered in CMC Vellore in the time period of June 31st 2015 and June 31st 2013 were included. Maternal outcomes compared were infertility, previous abortions, gestational diabetes, pregestational diabetes, gestational hypertension, chronic hypertension, blood loss more than 1 litre, postpartum fever, wound infection and duration of hospital stay. Fetal outcomes compared were macrosomia, NICU admission, APGAR < 7 at 5 minutes of birth.

RESULTS: The rate of gestational hypertension and chronic hypertension were 5.5%, nil in normal BMI group and 41.3%, 21.7% in the group with BMI >35 kg/m². The rate of previous abortion, history of infertility, gestational diabetes, failed induction was 13.7%, 8.2%, 18.1%, 16.3% in normal BMI group and 28.3%, 15%, 39.1%, 34.6% in the BMI > 35 kg/m² category. The rest of the maternal outcomes had no significant difference. In the fetal outcomes compared, macrosomia was nil in normal BMI compared to 10.9% in group with BMI > 35 kg/m². APGAR < 7 at 5 minutes and NICU admission had no significant difference.

CONCLUSION: The rate of gestational and chronic hypertension is significantly higher in the category of BMI > 35kg/m². The rates of infertility, history of abortions, gestational diabetes, failed induction is higher in women with BMI > 35 kg/m². Thus
adequate size BP measuring cuffs should be used to avoid unnecessary inductions for gestational hypertension without preeclampsia and women should be counseled about optimizing pre pregnancy BMI to avoid complications.

KEY WORDS: Primary caesarean, BMI>35kg/m2, gestational hypertension.