

STUDY OF MATERNAL AND FETAL OUTCOME OF GRAND MULTIPARA.

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Abstract

Background: Pregnancies in grand multipara have been considered risky for many decades as there are higher chances of complications during pregnancy, labour and puerperium in these women. This study aims to find out various maternal and fetal complications associated with grand multiparity during pregnancy and labour.

Methods: A descriptive observational study was conducted in the department of obstetrics and gynaecology of Sir T General hospital and Government medical college and hospital, Bhavnagar, Gujarat, from May 2019 till April 2020. It includes 185 cases of grand multipara women. All the women who delivered had four or more previous viable pregnancies were included in the study.

Results: In the total 185 cases that were included in the study, the common medical illnesses found in grand multipara were anemia (25.40%), preeclampsia/ eclampsia (4.86%) and gestational diabetics mellitus (1.86%). Other complications observed were malpresentations (2.70). Caesarian section was required in 16.21% of the cases. In perinatal outcomes, 9.72% births were still birth. 34.59% babies were of low birth weight.

Conclusion: Grand multiparity remains a risk in pregnancy and is associated with an increased prevalence of maternal and neonatal complications but it might be unjustifiable to attribute all risk to parity alone, risk assessment should be based on age, past obstetric and medical history.

Keywords: Grand Multipara, Maternal outcome, fetal outcome

Introduction

International Federation of Gynecology and Obstetrics (1993) define multiparity as delivery of two to four infants, grandmultiparity as delivery of the fifth to ninth infant, whereas women who are undergoing their tenth (or more) delivery are considered to be great grand multiparas [1]. Grand multiparity could be seen as an indicator of low literacy, poverty and other forms of injustice and inequity faced by women in the developing world. Grand multiparity is considered as dangerous and high risk clinical entity as certain complications during pregnancy, labour and puerperium are thought to occur with increased prevalence in these women. It is associated with maternal anaemia in pregnancy, antepartum haemorrhage, abnormal foetal presentation, post-partum haemorrhage as well as medical conditions such as hypertensive disorders in pregnancy [2-4]. In addition, there are associated perinatal problems including low birth weight, preterm birth, and congenital malformations [5-8]. The complications of grandmultiparity may be more pronounced in the environment where there is no facility for maternal and child health services especially in unregistered cases and home deliveries. Some complications that are classically associated with grand multiparity include; fetal malpresentations, dysfunctional

labour, abruption placentae, placenta previa, anemia, third stage complications like PPH, retained placenta and uterine inversion. Ruptured uterus, macrosomic babies are also more commonly observed in grand multipara. In developed countries grand multiparity is becoming rare but in developing countries it is higher and considered a public health problem. Anemia, iron, vitB12 deficiency and folic acid deficiency is the commonest problem associated with grand multiparity. Hypertensive disorders are found with increased frequency in grand multiparity. [9,10] Advanced maternal age, obesity may play important role in its development. Premature separation of normally situated placenta also occurs more frequently in them.[11] There are higher frequencies of malpresentations in grand multipara. These malpresentations directly affect the outcome of labour by causing higher incidence of obstructed labour, prolonged labour and operative delivery which increases maternal mortality and morbidity as well as perinatal mortality.[12-14] Cesarean rates are also high in grand multiparity due to malpresentations, malposition, likelihood of CPD, twin pregnancy, placenta previa and placental abruption.[15-16] The incidence of both spontaneous and induced abortions due to unwanted pregnancy is very high in GMP women. It is one of the major causes of maternal deaths. Rupture of uterus is the gravest complication of high parity. Third stage

complications like PPH, retained placenta also occur more frequently in these women due to atony of uterus, lack of retraction and injuries to genital tract. There is increased incidence of twin pregnancy in GMP due to high parity and maternal age.

Material and Methods:

This study was conducted at the department of obstetrics and gynecology, Government medical college and hospital, Bhavnagar Gujarat.. The study is a descriptive type of study. The present study was conducted during May, 2019 to April, 2020. All antenatal women who had four or more previous viable child were included in the study. All the women with less than four viable child were excluded from the study. Multiple pregnancies were counted as a singleton pregnancy and abortion, ectopic pregnancy and H. Mole were not included in the parity. About 185 patients according to the inclusion criteria were included in the study. Informed verbal consent was taken from the all study participants. A detailed history of the patient was taken with through physical examination and base line investigations like hemoglobin, blood group, blood sugar, urine examination and USG were carried out. The data was analysed and tabulated in form of frequency and percentage.

Results:

Table 1: Distribution of Cases According to Age Group.

Age groups in years	Frequency (n=185)	Percentage
25-30	120	64.86%
31-35	40	21.62%
36-40	15	8.1%

Table 1 shows majority of cases found in age group of 25-30 years of age. 8.1 % of multipara were of age between 36-40 years of age.

Table 2: Distribution of Cases According to Gravida .

Gravida	Frequency (n=185)	Percentage
5	96	51.89 %
6	54	29.18 %
7	27	14.59 %
8	6	3.25 %
9	2	1.08 %

Table 2 shows distribution of cases according to gravid. 51.89 % of cases were of gravida 5. 29.18% of cases were of gravida 6. 14.59% of cases were of gravida 7.

Table 3: Distribution of Cases According to Parity.

Parity	Frequency (n=185)	Percentage
4	117	64.32 %
5	51	27.56 %
6	11	5.9 %
7	04	2.1 %

Table 3 shows 27.56 % cases were of parity 5, 64.32% of cases were of parity 4. And 5.9% of cases were of parity 6.

Table 4: Mode of delivery in grand multipara.

Mode of Delivery	Frequency (n=185)	Percentage
Normal vaginal	154	83.25%
Caesarean Section	30	16.21 %
VBAC	01	0.54 %

83.25 % of grandmultipara were delivered by normal vaginal delivery. 16.21 % of cases were delivered by Caesarean section. One case was delivered by VBAC.

Table 5: Pregnancy complication in grand multipara.

Pregnancy complications	Frequency (n=185)	Percentage
Anemia	47	25.40 %
Eclampsia / Pre Eclampsia	09	4.86 %
Diabetes	03	1.6 %
Malpresentation	05	2.7 %
Obstructed labour	01	0.54 %
Abruptio + IUFD	06	3.24 %
PPH	04	2.16 %
No complications	107	57.83 %

Table 5 shows the pregnancy outcome and complications in grand multipara.

57.83% of cases did not develop any complications. 25.4% of multipara had anemia.

4.86% of cases developed Eclampsia / Pre Eclampsia. 3 cases developed diabetes. 5 cases had malpresentation. 6 cases had abruption placenta. 4 subjects had post partum haemorrhage.

Table 6: Perinatal outcome in grand multipara.

Birth outcome	Frequency	Percentage
Live birth	167	90.27 %
Still birth	18	9.72 %
Birth weight	Frequency	Percentage
Low birth weight	64	34.59 %
Normal weight	121	65.40 %

Above table shows perinatal outcome in grand multipara. 90.27% multipara gave live birth and 9.72% multipara had given still birth babies. 65.40% babies had normal birth and 34.59% babies were low birth weight.

Discussion:

In our study 99% of grand multiparas were of rural area and found belonging to lower socioeconomic status and poorer education profile and unaware about risk of complications. Roman H *et al.*; [17] also stated in their study that grand multipara was associated with low socioeconomic status and education and poorer prenatal care. Major cause of increasing parity be gender preference, lack of awareness of contraception methods, contraception failure, illiteracy, previous perinatal deaths, desire of baby by new husband etc. Mgaya AH *et al.*; [18] Anaemia, most common complication is known to be

associated with multiple factors such as poor socio-economic status, high parity, short birth interval, poor diet in quantity and quality as well (multiple factors are present in our patients). Prevalence of anaemia is decreased in India in last 5-10 years because of availability of free iron tablet and awareness of different programmes initiated for better maternal and fetal outcome by Indian government. Age related changes in vascular compliance, atherosclerotic changes and endothelium dependent vasoconstriction make these women more susceptible for hypertensive disorders.

The high rate of CS among grandmultiparas women in this study can be explained by high frequency of fetal distress, diabetes mellitus and pregnancy induced hypertension. All of these complications of pregnancy are well documented to increase the rate of caesarean delivery. This data showed, that within grandmultiparity, 160(91.8%) of grandmultiparas were less than 35 years of age, of whom 30 (16.21%) were delivered by CS. This indicates that, the high rate of CS among old grandmultiparas, may be due to secondary contracted pelvic as a result of repeated compensatory lordosis of pregnancy [19].

Increasing birth order also increases the frequency of hypertension, diabetes, placental complications and operative intervention. In our study also the frequency of these disorders was high. The cases of anemia in our study were 25.40%. The frequency of pre eclampsia in our study was 4.86%. This is similar to a study by Al Sibai et al. (1987) in which the incidence was 6.1%. Our study observed DM in 1.6% of the cases. One study has recorded 9.9% frequency of glucose intolerance in GMP women. This is in contrast to a study by Al Sibai et al. in which DM caused the least pre-delivery complications.[20] Our frequency of primary PPH was 2.16%. Nabeel et al. reported incidence of 13.4% (2005). Our study showed that pregnancy and delivery are at greater risk in grand multipara. Maternal morbidity and mortality are also increased. This is similar to the results of previous studies.[21-23]

Conclusion:

Grand multiparity is still a major obstetric hazard in developing countries, where illiteracy, socio economic background and religion are the key factors to contribute towards grand multiparity. Our finding suggests that a risk definitely exists with grandmultiparity but it might be unreasonable to attribute all risks due to parity. Instead risk should be assessed based on woman's age, past obstetric and medical history. Now a day in provision of modern and refined maternity care, these risks can be mitigated by careful antenatal risk factors identification, careful use of oxytocics and active management of third stage of labour. But, as this is seen that risk exists so it is

better to prevent grand multiparity by effective family planning measures, by increasing the level of education and by the removal of old religious beliefs and taboos regarding contraceptive methods.

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