wjpmr, 2017,3(2), 162-165

SJIF Impact Factor: 4.103

WORLD JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.wjpmr.com

Research Article

ISSN 2455-3301

WJPMR

A CLINICAL STUDY TO ASSESS THE MATERNAL AND FOETAL OUTCOME IN GRANDMULTIPARA

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Article Received on 02/01/2017 **Article Revised on 22/01/2017** **Article Accepted on 13/02/2017**

ABSTRACT

Objective: To determine the frequency of grand multiparity and its effect on maternal and fetal outcome in our tertiary care facility. **Design:** A descriptive study done in Department of Obstetrics and Gynaecology, Goverment Medical College, Kota (RAJASTHAN). **Subjects and Methods:** All booked, unbooked and referred grandmultipara women were included in the study. Booked primipara women and women with preexisting medical disorders were excluded. All the information collected on a form by taking history, performing an examination and laboratory investigations was analyzed. **Results:** During the study period, a total of 4430 deliveries were conducted in our Hospital and among them 200 (4.5%) women were grand multipara. Most of these women belonged to age group 21-30 years (n=112). A high frequency of anaemia (100%), followed by antipartum haemorrhage (14%), hypertension (12.5%), obstructed labor (5.5%), postpartum haemorrhage (6%) found in these cases. Fetal loss was observed in 7.5% of grand multiparas. **Conclusion:** Grand multiparity is still a high risk pregnancy in our facility. The causes are complex, multiple and interrelated but mostly preventable. In our study, grand multiparity was also associated with adverse maternal and fetal outcomes. Hence, there is a need for proper pregnancy evaluation and regular antenatal checkup, intrapartum care and postnatal follow up to improve the maternal care in women.

KEYWORDS: Grand Multiparity, Pregnancy, Foetus.

INTRODUCTION

The concept of a risk threshold for the relationship between parity and pregnancy outcome has been of concern for decades. Associations have been found between parity and adverse pregnancy outcomes. Grand multiparity is the condition of giving birth following 5 or more previous pregnancies.[1] Other factors contributing to its prevalence are illiteracy, religious beliefs and norms which are a stumbling block to greater contraceptive use.[2] The definition of Some authors have defined a grand multipara women to have seven children whereas Toohey, et al[3] have used the definition of parity greater or equal to 5. The International Federation of Gynaecology and Obstetrics in 1993 defined grand multiparity as delivery of 5th to 9th infant whereas women who are undergoing their 10th or more delivery are considered to be great grand multipara.[4] The incidence of great multiparity is very low today in economically developed countries. It occurs in some populations or communities mainly in those where contraception is not accepted because of specific religious or cultural beliefs.[5] Common complications associated with grand multiparity are antepartum haemorrhage, gestational diabetes mellitus, pregnancy-associated hypertension, premature rupture of membranes, preterm labor and postpartum haemorrhage.[5-7] In grand multipara women, the duration of the active phase of labor is increased after the 4th child. Failure of descent of the presenting part during the first stage of labor and arrest of cervical dilation result in a high caesarean section rate. There is also a high incidence of ruptured uterus in grand multiparous women and frequently, they are admitted in a moribund state resulting in increased morbidity and mortality.[8-10] This study was undertaken to identify and address some of these issues encountered in our facility.

SUBJECTS AND METHODS

This descriptive study was conducted at the Department of Obstetrics and Gynaecology Government Medical College Kota RAJASTHAN From 2015 - 2016. All antenatals patients were included in this study until we got 200 cases of grand multipara. All persons included in this study were informed about the nature the study. A detailed information regarding identification, age, residence, occupation, education and socioeconomic status was obtained. Obstetric history including age at marriage, gravida, para, living childrens, youngest child, LMP, antepartum haemorrhage and pregnancy induced hypertension were obtained. A thorough physical

examination including genral, CVS, RVS was carried out. A per abdominal examination including fundal height, fetal lie, position, presention, fetal heart rate was carried out. then a pelvic examination was done and stage of labour as certained. All unbooked and referred grand multipara women (para 05 or above) were included in the study. Booked primipara women and women with preexisting medical disorders were excluded. Data were collected from these women through a pre-designed form. All particulars regarding nature of labour, duration, mode of delivery, indication for intervention and completion, if any, were noted. Fetal outcome in term of weight apgar score, morbidity and mortality were recorded.

RESULTS

During the study period, 4430 deliveries were conducted in our hospital and among them, 200 cases were grand multipara with a frequency of 4.5 %. Most of the women were of poor socio-economic status (monthly household income less than Rupees 5000) and from remote areas. Among them, 188 were unbooked and the 12 cases booked. Most of the women belonged to age group of 21-30 years. The lowest trend of grand multiparity was observed in women with more than 40 years of age (Table 1).

Table 1: Distribution of Cases According To Age.

Age in Years	Numbers of Cases	Percentage
<20	0	0
21-30	112	56
31-40	67	33.5
>40	21	10.50
Total	200	100

More than one complication was encountered in most of the women and these suffered mainly from anaemia (haemoglobin <11g/dl), gestational hypertension, antepartum haemorrhage (abruption placenta, placenta previa), postpartum haemorrhage and malpresentation, obstructed labour (**Table 2**). Atony of uterus was found as the major contributor for postpartum haemorrhage. In malpresentation, most of the women presented with transverse lie while two had hand prolapse. Uterine rupture was observed as a maternal complication in 5 women – The main reasons to resort to cesarean section were obstructed labour and Obstetrical hysterectomy was required in 04 cases - 02 had caesarean hysterectomy due to badly ruptured uterus while 02 required hysterectomy due to uncontrollable postpartum haemorrhage secondary to uterine atony. Hypovolemic shock secondary to post partum haemorrhage was a cause of death in 75% of cases needing hysterectomy.

Table 2: Distribution of cases according to complications.

Complications	No. of cases	Percentage
Anaemia	200	100
Antepartum haemorrhage	28	14
Hypertension	25	12.5
Malpresentation	16	8
Postpartum haemorrhage	20	10
Obstructed labor	11	5.5
Rupture of uterus	5	2.5

In our study LSCS rates (16%) and instrumental delivery (.5%) were comparable in both GMP and control group. Twin delivery in GMP group was 5% while in control was 1.5%. Assisted breech delivery in grandmultipara was 4% while in control was 3% due to higher incidence of malpresentation. (Table no. 3).

TABLE No. 3: Distribution of cases according to type of abnormal delivery.

Type of abnormal delivery	No. of cases	Percentage
LSCS	32	16
Twin	10	5
Assisted breach	8	4
Instrumental	1	0.5
Total	51	25.5

Regarding the fetal outcome, 185 babies were born alive. However, early neonatal death seen in 5 cases, IUD in 8 cases and 2 cases were still born making overall neonatal mortality 7.5%. (Table no. 4) None of the babies had congenital abnormalities.

Table N. 4: Distribution of cases according to perinatal complication.

Perinatal mortality	No. of cases	Percentage
No mortality	185	92.5
Early neonatal death	5	2.5
IUD	8	4
Still born	2	1
Total	200	100

The majority 179 (89.5%) of these babies had a birth weight ranging from 2.5 to 3.9 kg.(Table no. 5).

Table no. 5: Distribution of cases according to birth weight of babies.

Weight of babies [Kg]	No. of cases	Percentage
4 or more	3	1.5
2.5 -3.9	179	89.5
<2.5	18	9
Total	200	100

DISCUSSION

Grand multiparity is a rare issue in developed countries, but it is still common in developing countries like India.[11,12] The frequency of grand multiparity found in this study is comparable with other studies.[13-14] this study, most of the women reported no antenatal care and lived in distant areas from the city. We also found a higher number of these women in age group >21-30 years. Our findings are consistent with the study of Saadia[15] et al. Regarding the parity distribution, 30% of women in this study were para 5 and this finding is consistent with study of Karim[16] et al. The vast majority of women in this study were found anaemic with haemoglobin less than 11gm/dl (100%) which is reported as 64.3% by Karim, et al. Hypertensive disorders were found in 12.5% of women in this study which was similar reported by Munium et al (15.4%), Saadia et al (14.3%) and Karim at al (14.3%). Antepartum haemorrhage was found in 28% of our women and placenta previa was found more prevalent than abruptio placenta. This observation was in contrast to that made by Toohey et al in which abruptio placenta was more frequent. Postpartum haemorrhage significantly increased in grand multiparas versus non-grand multipara women. In grand multiparas group 21% of women presented with obstructed labor. This was in contrast to the study conducted by Saadia, where obstructed labor was found in 4.34% of women. Most of women in this study had taken a trial of labor outside the hospital and later presented with obstructed labor. In this study, caesarean section rate and instrumental delivery were comparable in both GMP and control group similar to the study done by Munium et al, who found no significant difference in the prevalence rate of caesarean section or normal delivery in the two groups (grand multipara versus non grand multipara). However, in other studies conducted by Evaldson[17] Ozumba[18] and Irvine increased caesarean section rate was found among grand multipara. In this study, emergency hysterectomy was performed in 04 patients. Four maternal deaths also occurred and the main causes were haemorrhage and uterine rupture. In this study, live fetal outcome was 92.5%, early neonatal deaths 2.5%, IUD 4% and still born was 1%.

CONCLUSION

Grand multiparity is still a high-risk pregnancy in our facility. The causes are complex, multiple and interrelated but mostly preventable. In our study, grand multiparity was also associated with adverse maternal and fetal outcomes. Hence, there is a need for proper pregnancy evaluation and regular antenatal checkup, intrapartum care and postnatal follow up to improve the maternal care in women.

RECOMMENDATIONS

1. A proper antenatal care system shall be developed involving the local community workers, system shall be used to categorize low risk and high risk pregnancies and to plan their mode and place of delivery.
2. A risk scoring labor and arrange referral earlier rather than using oxytocic agents or doing intrauterine manipulation.
3. The laboring women should be vigilantly monitored. Partograph should be used for early detection of an abnormal progress of labor so that early referral can be made.
4. Considering the high number of referral patients who are under care of trained health care staff, there shall be refresher courses for them and obstetrical units should be frequently assessed for the standard of obstetrical care.
5. An intercommunication system should be builtbetween the local health and tertiary care centers.
6. Traditional Birth Attendants (TBAs) should be well trained to recognize abnormal religious leaders and family members to encourage pregnant women to obtain antenatal care.
7. To avoid the risks of grand multiparity, public awareness and easy access to various methods of contraception should be created.
8. The misconceptions and social taboos about family planning can only be dealt by sensitive and sympathetic counseling with involvement of the male partner.
9. Nutritional status of the reproductive age groupshould be improved.
10. All means of communication and transport should be improved so that women can reach secondary and tertiary care levels more easily. This problem can only be worked out by the government's attention and an increased health budget.

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