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Original Research Article

Pregnancy Outcome in Grand multiparity in Modern Setting

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Abstract: Antenatal, intrapartum and postpartum complications are thought to be more in grand multiparous females and this is labeled among one of high risk pregnancy group. Our aim is to find maternal and perinatal complications and outcome in grand multiparas in a tertiary care centre and should this still be considered a high risk group or not. This hospital based descriptive type of observational study conducted in Department of Obstetrics and Gynaecology, SMS Medical College, 552 grand multiparas were studied in a time period of 2 years. All the women who delivered at S.M.S. medical college and had five or more previous viable pregnancies were included in the study. Most common complications found in our study was anaemia(31.88%), then hypertensive disorders of pregnancy(10.45%) , diabetes mellitus (4.71%) , placenta previa(5.43%), malpresentation(6.16%). 3 cases of uterine rupture were seen, from which one ended up in hysterectomy. Fetal complications like still birth was 4.71%, NICU admission was 6.52% and low APGAR score i.e. <7/10 was observed in 9.42% of cases. 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: multipara, contraception, pregnancy outcome, malpresentation, abruptio placentae, placenta previa

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.

METHOD:

This hospital based descriptive type of observational study conducted in Department of Obstetrics and Gynaecology, SMS Medical College, 552 grand multiparas were studied in a time period of 2 years from 1st December2014 to 30th November 2016. All the women who delivered at S.M.S. medical college and had five or more previous viable pregnancies were included in the study. Women with multiple pregnancies were excluded from the study. Following variables were studied: demographic characteristics, antenatal profile, maternal and perinatal outcome. Informed 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 ultrasound for fetal wellbeing were carried out.

RESULTS:

52.90% of women were below 30 years of age (younger grand multiparas) indicating early marriages and child bearing in India.

78.98%, more than half of patients were illiterate or having poor education and 57.98% belonging to lower socioeconomic status. 53.99% women were unbooked at time of labor room admission.

Mean parity was found to be 5.329. No great grand multipara was seen during study period.

Around 31.88% were anaemic at time of admission. Placenta previa at term was also observed in 5.43%. PPH, which is considered an obstetric emergency and more prevalent with increased parity, was seen in 5.07% of grand multiparas and reason behind is active management of 3rd stage of labour and availability of uterotonic agents to all women delivered in hospital. Episiotomy and soft tissue injury were negligible because of better flexibility of pelvis and soft tissues with increasing number of deliveries. Three cases of uterine rupture were observed from which one ended up in obstetric hysterectomy.

5 minute APGAR <7/10 was observed in 9.42% and rate of NICU admission was 6.52%. Still birth and neonatal death was seen in 7.97% of cases.

Table 1: Distribution of Cases According to Age Group

Age Group (in yrs)		
	No.	%
<25	46	8.33
25 – 29	246	44.57
30 – 34	182	32.97
35 – 39	64	11.59
>40	14	2.54
Total	552	100.00

Table 2: Distribution of cases according to education, socioeconomic status and booking status-

Educational Status	Group-B	
	No.	%
Illiterate	156	28.26
Primary	280	50.72
Secondary	78	14.13
Tertiary	38	6.89
Booking Status		
Booked	254	46.01
Unbooked	298	53.99
Total	552	100.00
Socio-economic Status		
Upper	48	8.69
Middle	184	33.33
Lower	320	57.98
Total	552	100.00

Table 3: Distribution of Cases According to Parity

Parity	N=	%
5-6	524	94.93
7-8	22	3.98
9-10	6	1.09
	552	100.00

Table 4: Antepartum, Intrapartum and Post-partum Complications

ANC Complications	(n=552)	
	No.	%
Anaemia	176	31.88
GH /Ec/ Pre Ec	56	10.45
Chronic Hypertension	10	1.8
Diabetes Mellitus	26	4.71
Placenta previa	30	5.43
Malpresentation	34	6.16
Labour characteristics		
Induction Of Labor	18	3.26
Augmentation of labor	24	4.35
Meconium Stained Liquor	52	9.42
CTG abnormalities	22	3.98
Abruption	10	1.81
3rd Stage Complications		
PPH	28	5.07
Soft Tissue Injury	0	0.00
Episiotomy	6	1.09
Uterine rupture	3	0.54
Obst. hysterectomy	1	0.18

Table 5: Distribution of Cases According to Neonatal Outcome

Neonatal Outcome	(n=552)	
	No.	%
5 Min APGAR <7/10	52	9.42
NICU Admission	36	6.52
Respiratory Distress Syndrome	10	1.82
Congenital Anomaly	8	1.45
Still birth	26	4.71
Neonatal death	18	3.26
Fetal macrosomia	16	2.89

DISCUSSION:

Our study showed that 53.99% multiparous patients came to the hospital unbooked, without any antenatal investigations and prior checkup done before for purpose of delivery. Lal R *et al.;* [9] found in their study that around 78% of grand multiparas were unbooked.

In our study grand multiparas were found belonging to lower socioeconomic status and poorer education profile and unaware about risk of complications. Roman H *et al.;* [10] also stated in their study that grand multipara was associated with low socioeconomic status and education and poorer prenatal care. Mean parity was found to be 5.329 and 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 mainly in muslims etc. Mgaya AH *et al.;* [11] in their study found mean parity 5.08, similar to ours.

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. Increased prevalence of placenta previa is because of advanced maternal age leading to atherosclerotic changes which causes decreased uterine blood flow and placental enlargement, any kind of surgical trauma to

endometrium and myometrium (including previous normal delivery, caesarean section, abortion, myomectomy etc) .

Lax abdominal wall, decreased muscle tone, pendulous abdomen, increased pelvic inclination because of hyper lordosis of lumbar spine and increase incidence of placenta previa are possible risk factors for increasing incidence of malpresentation with parity results of our study was similar as observed by Sultan S *et al.;* in 2013 [12] and Vaswani PR *et al.;* [13] in their study.

CONCLUSION:

Our finding suggests that a risk definitely exists with grandmultiparity but it might be unreasonable to attribute all risks 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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