Maternal and Foetal Outcome of Grand Multipara

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Abstract
Introduction: Pregnancy in grand multipara has been considered as high risk because there is higher chance of complication during pregnancy, labour and puerperium.
Objective: To evaluate various maternal and foetal complications associated with a grand multipara during pregnancy, delivery and puerperium.
Methods: This prospective study was carried out from 1\(^{st}\) January 2016 to 31\(^{st}\) December 2016 in obstetrics and gynaecology department of Gonosashthaya Nogor Hospital, Dhanmondi, Dhaka. 200 grand multipara pregnant patients were selected those who got admitted in department of obstetrics and gynaecology, Gonosashthaya Nogor, Hospital during that period.
Results: It was found that incidence of grand multipara was 9.8%. Majority of the patient were 31-35 years old (51%). 71% patients never had antenatal check up. Caesarean section was high about 45%. Complications during labour were also high. Is was about 45%. Maternal morbidity was about 16%. Perinatal mortality was about 9.5%.
Keywords: Pregnancy, Maternal and Foetal Outcome, Grand Multipara.

Introduction
Parity refers to the number of previous pregnancies of more than 28 weeks and grand multipara is the condition of giving birth following 5 or more previous pregnancies. Grand multiparity is still high in Bangladesh among women of low socioeconomic class and in those getting married at a young age.

Other factors contributing to its prevalence are illiteracy and religious beliefs. The definition of grand multipara varies from study to study\(^1\)\(^-\)\(^5\). Toohey, et al\(^5\) have used the definition of parity greater or equal to 5. The international federation of Gynaecology and Obstetrics in 1993 defined grand multipara as delivery of 5\(^{th}\) or more infants. The incidence of grand multipara is very low in economically developed countries. It occurs in...
some population or community mainly in those
where contraception is not accepted because of
specific religious or cultural beliefs. Grand
multipara is associated with long list of
complication, which include, preterm labour,
anæmia, pendulous abdomen, malpresentation,
pre-eclampsia, placenta praevia and abruption
placenta. Labour among grand multipara patients
is not without complication and is regarded as a
high risk labour because of complications, like
uterine atony, postpartum haemorrhage,
obstructed labour, ruptured uterus and higher
incidence of operative delivery. Increase rate of
operative delivery due to abnormal position and
big baby and maternal exhaustion. The main
purpose of this study was to evaluate the maternal
and fatal outcome of grand multipara patient.

Methodology
This study was a hospital based observational
cross sectional study, carried out in in patient
department of obstetrics and gynaecology, of
Gonosashthaya Nogor hospital, Dhanmondi,
Dhaka in between 1st January 2016 to 31st
December 2016. Total 200 grand multipara
pregnant patients were selected those who got
admitted in department of obstetrics and
gynaecology GNH. Data was collected by
preformed questionnaire and check list. Cases
were selected according to inclusion and
exclusion criteria. Relavent information
(according to questionnaire) were taken from
patients. Data was processed manually and
analyzed with the help of SPSS (statistical
package for social sciences) version 16.0.

Results
In GNH total 200 grand multipara patients out of
2039 obstetrics patients were admitted from
January 2016 to December 2016 giving the
incidence of 9.8% and following results were
found.

Table 1
| Age in years | Number of patient (n=200) | Percentage |
|-------------|--------------------------|------------|
| 16-20       | 0                        | 0%         |
| 21-25       | 0                        | 0%         |
| 26-30       | 66                       | 33%        |
| 31-35       | 102                      | 51%        |
| 36-40       | 26                       | 13%        |
| 41->        | 6                        | 3%         |
| Total       | 200                      | 100%       |

Table 1 Highest number of (51%) grand multipara belonged to 31-35 years.

Table 2
| ANC       | No of patient (n-200) | Percentage |
|-----------|----------------------|------------|
| Regular   | 18                   | 9%         |
| Irregular | 40                   | 20%        |
| No        | 142                  | 71%        |
| Total     | 200                  | 100%       |

Table 2 Majority of the patient (71%) had no ANC.
Table 3
Presence of risk factors during admission of patient

| SL NO | Risk Factors          | Number of patient (n-200) | Percentage |
|-------|-----------------------|---------------------------|------------|
| 1     | Anaemia               | 160                       | 80%        |
| 2     | Pre eclampsia        | 10                        | 05%        |
| 3     | Eclampsia            | 02                        | 01%        |
| 4     | Malpresentation      | 08                        | 04%        |
| 5     | Oligohydramnios      | 05                        | 2.5%       |
| 6     | Polyhydramnios       | 04                        | 02%        |
| 7     | APH                   | 06                        | 03%        |
| 8     | DM                    | 05                        | 2.5%       |

200 100%

Table 3: Major number of grand multipara patient suffered from anaemia (80%), pre eclampsia (5%), malpresentation (4%), APH (3%).

Table 4
Mode of delivery

| SL NO | Mode of delivery | Number of patient (n-200) | Percentage |
|-------|------------------|---------------------------|------------|
| 1     | Vaginal delivery | 102                       | 51%        |
| 2     | LSCS             | 90                        | 45%        |
| 3     | Forceps          | 08                        | 04%        |

200 100%

Table 4 : Operative intervention in the form of caesarean section was high.

Table 5
Complication during delivery

| SL NO | Complication       | Number of patient | Percentage |
|-------|--------------------|-------------------|------------|
| 1     | Prolonged Labour   | 60                | 30%        |
| 2     | Obstructed Labour  | 12                | 06%        |
| 3     | Retained Placenta  | 10                | 05%        |
| 4     | PPH                | 08                | 04%        |

90 45%

Table 5: Major number of the patient suffered from prolonged labour (30%), obstructed labour (6%) and PPH (4%).

Table 6
Maternal morbidity following delivery.

| SL NO | Type of Morbidity | Number of patient | Percentage |
|-------|-------------------|-------------------|------------|
| 1     | Hypertension      | 14                | 07%        |
| 2     | Wound infection   | 07                | 3.5%       |
| 3     | Psychosis         | 06                | 03%        |
| 4     | Retention of urine| 05                | 2.5%       |

Total 32 16%

Table 6: Grand multipara suffered from different types of morbidity such as hypertension (7%), wound infection (3.5%), psychosis (3%), retention of urine (2.5%)

Table 7
Foetal Status

| SL NO | Condition of Foetus | Number of patient(n-200) | Percentage |
|-------|---------------------|---------------------------|------------|
| 1     | Live birth          | 181                       | 90.5%      |
| 2     | Still birth         | 19                        | 9.5%       |

200 100%

Table 7: Showed that live birth was 90.5% and still birth was 9.5%.
Discussion

Grand multipara is well known risk factor for the pregnant women with increased risk of maternal and fetal morbidity and mortality. There is increased incidence of obstetrical medical complications. For cultural and religious reasons grand multipara is not uncommon in our country. Lack of family planning results in the ultimate increase in the number of grand multipara women. The present study findings were discussed and compared with previously published relevant studies. The frequency (9.8%) of grand multipara found in this study was comparable with other studies2-5. This study found a higher of these women in age group between 31-35 years (51%). This finding was consistent with the study of saadia et al6. However, a higher frequency of grand multiparity in the age group >35 years has been reported by Munium et al2 and Karim et al7. While Samueloff et al7 reported the highest number of women in the age group between 30-35 years. In this study most of the patient (71%) did not receive any antenatal check up. Similar result was also found by Karim et al7. This study showed anaemia was 80%. This was because there was not enough interval between pregnancies for the women to replenish the iron stores. This finding was higher than reported by Munium et al2, Saadia et al6 and Karim et al7. Hypertensive disorder of pregnancy was 7%. This was explained by increased age of this group. The same finding were vehaskari et al9, Maymon et al10 and Al-Sibia et al11. Antepartum haemorrhage was found in 3%. AZZIZFA12 had reported antepartum haemorrhage significantly increased in grand multipara. In this current study it was observed that malpresentation was 4%. This findings agree with the findings done by Sibai et al11 while Vehaskari et al9.

In this study, more number of cases (45%) required caesarean section. In contrast to the study done by Munium et al2, who found no significant difference in the prevalence rate of caesarean section or normal delivery. However, in other studies conducted by Evaldson13, Ozumba14 and Irvine15 increased caesarean section rate was found among grand multipara which correlates with this study. In this present study it was observed that prolonged labour was 30%, this finding co-relates with that of other studies13-15. This study had shown that increased incidence of obstructed labour (6%) in grand multipara, which was consistent with other studies13-15, 17. In this study PPH was 4%.This agree with the study done in Nigeria16.

In this study, like fetal outcome was 90.5%, and still birth 9.5%. This still birth in our study is higher compared to study by Saadia et al6. It could be related to the fact that most patients arrived late having an already intrauterine death or with hypoxic babies.

Conclusion

Grand multipara still had high risk pregnancy. In this study grand multipara was also associated with adverse maternal and fetal outcomes. Most grand multipara was of older age and poor socio economic status. So, improvement in social class, health education, use of contraception and good antenatal and intrapartum monitoring are needed.

Reference

1. Bai J, Wong FW, Bauman A. Mohsin M. Parity and pregnancy outcomes. Am J Obset Gynecol.2002 ; 186:274-8.
2. MuniumS, Rahbar MH, Rizvi M, Mushtaq N. The effect of grand multiparity on pregnancy related complications: The Aga Khan University experience. J Pak Med Assoc. 2000; 50: 54-8.
3. Seidman DS. Ammon Y, Roll D, Stevensaon DK Gale R. Grand multiparity: an obstetric or neonatal risk factor? Am J Obset Gynecol .199988 ; 158:1034-9.
4. Samueloff A ,Mor–Yousef S, Seideman DS, Rabinowiz R , A ,Schenker JG Grand Multipara—a nationwide survey, Isr J Med Sci 1989;25: 625-9.
5. Toohey JS, Keegan KA Jr, Morgan MA, Francies J Task S, deVeciana M. The “dangerous multipara “ fact or fiction? Am J ObstetGynecol.1995; 172 :683-6
6. Fayed HM ,Abid SF and Stervens B. Risk factors in extreme grand multiparity , Int J Gynecolobstet 1993 41 17- 22.
7. Saadia Z,Farrukh R , Naheed F, Maternal outcome in grand multiparous. Ann King Edard Med Coll. 2002; 8 :207-10.
8. Azziz Karim s, MemonAM,Qadir N . Grand multiparity –A continuing problem in developing countries. Asia oceania J ObsetGynecol1988; 158:155-60.
9. Samueloff A . Schimmel MS , Eidelman AL.Grand multiparity. Is it a perinatal perinatal risk? Clin perinatal. 1998;25: 529-38.
10. Vehaskari A, Lahtinen J, Terho J Hazards of grand multiparity.: Ann chirGynaecol Fenn. 1968; 57(4):476-84.
11. Maymon E ,Ghezzi F, Shoham- Vardi L, Herskgowitz R , Franchi M , KatzMMazor M . Peripartum complications in grand multiparous women : para 6-9 versus para > or =10. : Eur J Obstet Gynaecol Reprod Biol. 1998 Oct ; 81(1):21-5.
12. AL-Sibai MH. Rahman MS Rahman J . Obstetric problems in the grand multipara : a clinical study of 1330 cases . J Obstet Gynaecol(Lahore) 1987:8(2):135-8.
13. Azziz FA. Pregnancy and Labour of grand multiparous Sudanceswomen. Int J Gynaecolobset 1980 Sep- Oct;18(2):144-6.
14. Evaldson GR. The grand multiparity in modern obstetrics .Gynecolobstet Invest .1990:30:217-30.
15. Ozumba BC ,Igwegbe AO . The challenge of grandmultiparity in Nigerian obstetrics practice. Int J Gynaecol obstet. 1992;27: 259-64.
16. Irvine LM Otigbah C, Crawfold and Satchell, Grand multiparity :an obstetric problemn Great Britain in the 90s? J ObsetGynecol1996;16:217.
17. Ogedengbe OK ,Ogunmokun AA Grand multiparity in Lagos, Nigeria . Niger Postgrad Med J .2003 Dec:10 (4):216-9.
18. Vedat- A Hasan –B, Islam –A .Rupture of uterus in labour. 1st J.M. Sci 1993-oct; 29(4):179-87.