

GRANDMULTIPARA

(Study of 816 cases)

by

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Introduction

Now a days grand multipara is defined as those women who have had 5 or more previous viable babies.

The dictum "Practice makes a man perfect" does not hold true when it comes to obstetrics. Grandmultiparas are liable to series of complications all the more dangerous because they are not suspected, as their past pregnancies were uneventful. Solomons in 1934 truly called them as "the dangerous multipara". Although few authors (Krebs, 1965; Schrafman and Silverstein, 1962) think that the danger of multiparity has been exaggerated.

In a developing country like ours where poverty, illiteracy, ignorance and lack of knowledge of family planning facilities available have greatly increased the incidence of grandmultipara. These women pose a problem when it is least expected and hence they deserve study from time to time.

Attempt has been made in present series to study the pattern of labour in grandmulti, associated complication of pregnancy, outcome of labour and maternal mortality. Attempt is also made to evaluate the socio-economical condition of these women.

Material and Methods

A retrospective study from case records of patients admitted to the department of

obstetrics and gynaecology at Irwin Group of Hospitals, Jamnagar from January 1976 to December 1978 was made. Total 816 Grandmultipara who had previously delivered 5 or more viable babies were taken for study and labelled as group A. Two thousand, eight hundred and ninety-two primigravida patients admitted during the same period and 6801 other multigravida with parity less than 5 also admitted during the same period were studied for comparison and they were labelled as Group B and C respectively. Thus totally 10,509 cases were studied and their available history, income, general condition, obstetric findings, progress and outcome of labour were noted. Routine investigations like haemoglobin and urine examinations were also recorded.

Observations and Discussion

Incidence: In present study the incidence of Grandmultipara was found to be 7.76% from total 10,509 deliveries. The incidence of grandmultipara as reported by different authors varies from 1.6% to 30.5%. The variation can be explained by the fact that different authors have taken different criteria for grandmultiparity (Table I).

Age

The age of grandmulti in present series varied from 25 to 45 years. Most of the women belonged to the age

TABLE I
Incidence of Grandmultipara as Reported by
Different Authors

Authors	Year	Percentage of grandmultipara
Dutta	1970	30.5
Miller	1954	24.4
Parikh	1965	17.1
Dey and Das	1970	16.7
Feeney	1953	12.6
Oxorn	1955	1.6
American Obstetrical Statistical cooperative	1970	4.3
Present series	1976-1978	7.26

group 25 to 35 years. This shows that most of the women had 5 or more children even before the age of 30 years. This is because of early marriage and lack of spacing between two pregnancies. 80% of Oxorn's and 47% of Kreb's cases of grandmultipara were past 35 years age. In present series only 5% were past 35 years. 8.4% of Kreb's and 1% of Deys' patients were past 40 years. In present study 2% of patients were above 40 years. Dutta (1970) reported 40% of cases below 30 years of age.

Parity

38.6% of the cases were para 5 and 29.78% of the cases were para 6 Miller (1954) and Dey (1970) reported 25.9% and 27% para 6 respectively. 15.8% were para 7 and same figures are reported by Dey (1970). 7.97% were para 8 in present series while 12% were para 8 in Dey's series. 7.8% of cases belonged to parity 9 to 16 Dey reported 11% of cases with parity 9 to 15.

The maximum parity recorded in this series was 16th para. Feeney (1953) reported 1 patient in her 20th and one in 21st pregnancy.

Socio-economical status

Ninety seven per cent of the patient had income less than Rs. 300 per month. Only 1% had income more than Rs. 500 per month.

In Dey's series (1970) 82% of grandmultipara belonged to lower income group, 10% to middle income group and 8% to high income group.

Majority of the patients seeking hospital care were poor in the present series.

Antenatal care

Only 204, 25% of grandmultipara were booked while 1735, 60% of group B patients and 2040, 30% of group C patients were booked.

In Dey's series (1970) 29% of grandmultipara and 40% of the women belonging to parity 2 and 4 had some antenatal care.

On account of the past uneventful pregnancies social customs and taboos and large family the grandmultipara do not come for antenatal care and hence many avoidable complications like anemia and toxemia are seen at time of delivery. Education and propaganda are required so that all grandmultipara can be directed to take antenatal care.

Number of primigravida seeking antenatal care was more in present series because people are aware of difficult labour in first pregnancy.

Anemia

10 gms % was considered to be normal standard of haemoglobin in a pregnant Indian woman. Only 328, 40.2% of grandmultipara had haemoglobin 10 gm % or above. Of this 231, 28.3% had Hb. 8 gm % or less and 24, 2.94% had Hb. less than 5 gm. % In comparison to this 1888, 65.29% of group B and 5552, 81.63% of group C patients had Hb above 10 gm%. Only 27,

0.9% of group B and 49, 0.7% of Group C had Hb less than 5 gm%. In Dey's series (1970), 100% of grandmultipara had haemoglobin less than 10 gm%. In Bhan's (1978) series 12.6% of patients had Hb above 10 gm%, 7.6% had Hb less than 5 mg%. Donald (1974) and Israel and Blazer (1965) had more than double cases of anaemia in grandmultipara than other women. It appears that repeated pregnancy is within a short span of life along with poverty and poor hygienic condition are the main causes of anaemia in grandmultipara. Frequency of severe anaemia was 3 to 5 times more than group B and C in present series.

Toxaemia of Pregnancy

Thirty two 3.92% of grandmulti, 58.2% of group B and 34, 0.5% of group C cases had toxaemia of pregnancy. Out of these cases 2, 0.24% of grandmulti, 2, 0.38% of group B and 3, 0.04% of group C patients suffered from eclampsia. Frequency of toxaemia was double in grandmulti than group B and 8 times more than group C cases. In Dey's series (1970) incidence of pre-eclampsia was 9%; George and Power (1949) reported 9.7% while Miller gave incidence of 4.1% of toxaemia of pregnancy.

Placenta Praevia

Seventeen, 2.08% of the grandmultis, 17, 0.5% of group B cases and 59, 0.86% of group C cases had placenta praevia. The incidence of placenta praevia was nearly 3 to 4 times more in grandmulti than in group B and C.

In Dey's series (1970) the incidence of placenta praevia was 6%. Bhan (1975) reported incidence of 0.8%, Israel and Blazer (1965) gave incidence of 1.04%. Bieniarz (1959) pointed out that high parity leads to augmentation of venous

drainage from lower portion of uterus and lower placentation creating the preponderance of accidental haemorrhage and placenta praevia.

Accidental Haemorrhage

Twenty-eight, 3.43% of grandmultipara 20, 0.69% of group B and 63, 0.92% of group C cases had accidental haemorrhage. The incidence of accidental haemorrhage was 4 to 5 times more in grandmulti than group B and C.

In Dey's series incidence of accidental haemorrhage was 11%, Miller reported 2.1%, Schram (1954) reported 2.93% and Nelson and Sandmeyer (1958) reported 3% incidence of accidental haemorrhage. Bhan (1975) reported 6.2% incidence of accidental haemorrhage. The incidence in present series is well in comparison to most of the authors except Dey & Bhan who reported quite high incidence of accidental haemorrhage.

Malpresentations

In present series 7.72% of grandmultipara had malpresentation 5.95% of group B and 2.54% of group C had malpresentation. Incidence of malpresentation was 1.5 times more than group B and 3 times more than group C in grandmulti. In Dey's series 9% grandmultipara and 6.6% of the other women had malpresentation. Krieb (1956) Oxorn (1955) reported 4.8% and 12.6% incidence of malpresentation respectively. Bhan (1975) did not observe higher incidence of malpresentations in grandmulti than other women, but observed higher incidence of Brow presentation in grandmulti. (21.5%)

In present series 6, 0.35% of grandmulti had cord prolapse, while 4, 0.13% of group B and 3, 0.04% group C had cord prolapse. Incidence of cord prolapse in grandmulti was higher than other women.

Multiple pregnancy

The incidence of multiple pregnancy was 27, 3.31% in grandmulti 25, 0.86% of group B cases and 71, 1.04% of group C cases had multiple pregnancy. The incidence of multiple pregnancy in grandmulti was 3 times more than group B and C.

Dey reported 2% incidence of multiple pregnancy, Schram (1954) observed 2.3% incidence, Krieb (1956) Bhan (1978) reported 12.1% and 4.3% incidence of multiple pregnancy in grandmulti respectively.

Hydramnios

Twelve, 1.47% of grandmulti 16, 0.55% of group B cases and 23, 0.41% group C cases had hydramnios. The incidence of hydramnios in grandmulti was 2.5 to 5 times more than group B and C.

In Dey's series 2% of grandmulti had hydramnios. O' Sullivan's (1963) reported 2.4% incidence of hydramnios in grandmulti.

Cephalopelvic Disproportion

0.25% of the grandmulti had cephalopelvic disproportion in present series. In Dey's series 3% of grandmulti had cephalopelvic disproportion. Feeny observed C.P.D. in 2.71% of cases. Bhan (1975) observed 11.1% incidence of contracted pelvis.

One is tempted to regard the pelvis of highly parous patient as beyond question. Nothing could be more dangerous than such an attitude. Occasionally contracted pelvis can occur secondarily in adult quite apart from osteomalacia. Increasing inclination of pelvic brim and sometimes subluxation of sacroiliac joints can reduce the true conjugate effectively. Failure to recognise this can lead to rupture uterus.

Mode of Delivery

Seventy-two, 9.82% of grandmulti, 515, 17.8% of group B cases and 216, 3.17% of group C cases required artificial intervention. Except forceps and vacuum delivery all other modes of artificial intervention were more amongst grandmulti.

Incidence of C.S. was 35, 4.29% in grandmulti while 110, 3.8% of group B and 116, 1.70% of group C cases required C.S. In Dey's series 12% of grandmulti required C.S. The incidence of C.S. was 1.2% in Schram (1954) series and 15.9% in O'Sullivan (1963) series.

Indications for C.S. (Table II)

Main indication in majority of the patients was placenta praevia. Transverse live and foetomaternal distress were other most common indications.

TABLE II
Indication for C.S. in grandmulti.

Indication	No. of cases	Percentage
Placenta praevia	10	28.5
Accidental haemorrhage	2	5.7
Previous V.V.F. repair	2	5.7
Threatened rupture	2	5.7
Contracted pelvis	2	5.7
Cord prolapse	1	2.85
Foetomaternal distress	5	14.27
Cervical dystocia	1	2.8
Abnormal presentation	8	22.78
Prolonged first stage	2	5.7

In Bhan series (1975) 10.9% of grandmultis required C.S. 11% were for contracted pelvis and same number of patients had cervical dystocia. 9.8% were due to threatened rupture uterus. In Bhan's series main indications were contracted pelvis and impending rupture of uterus.

Retained Placenta

0.98% of grandmulti and 0.345% of

group B cases and 0.07% of group C cases had retained placenta. In Dey's series 3% had retained placenta. In Bhans' series 1.7% had retained placenta.

Ruptured Uterus

Out of 9 cases of ruptured uterus, 2 were in grandmulti who underwent C.S. hysterectomy and 7 were multigravida from group C. Incidence of ruptured uterus in grandmulti was 0.25% and 0.1% in group C. None of group B cases had ruptured uterus. Incidence of rupture was as follows by different authors. Dey (1970) 1%, Feeny (1953) 1.1%, Parikh (1965) 0.1%, Bhan (1975) 0.4%.

Foetal Outcome

Prematurity: Considering babies with weight less than 2 kg as premature, incidence of prematurity was 103, 12.62% in grandmulti, 572, 19.78% of group B babies and 657, 9.66% of group C babies were premature.

Incidence of prematurity was as follows reported by different authors was Dey (1970) 9.8%, Parikh (1965) 14.1%, Schram (1954) 5.6%, Krebs (1956) 6.8%.

Stillbirth

Seventy-one, 8.7% of grandmultipara had still born babies, 8, 2.8% from group B and 145, 2.1% from group C had still born babies. Incidence of stillbirth was higher in grandmulti than group B and C.

In Dey's series 15.9% of grandmulti had stillbirth and in Bhan's series 13.3% of grandmulti had stillbirth while 6.6% of other women had still birth.

High parity with higher incidence of prematurity anaemia, toxemia, multiple pregnancy and artificial intervention is responsible for high still birth rate.

Congenital Malformation

Thirteen, 1.59% of grandmulti gave-

birth to deformed babies, while 22, 0.76% of group B and 26, 0.38% of group C cases had deformed babies. Incidence of congenital malformation was higher in grandmulti than other women.

In Dey's series 2.9% of patient had deformed babies in Bhan's series 2% of grandmulti and 1.2% of other women had deformed babies.

Maternal Mortality (Table III)

There were 18, 2.2% deaths in grandmulti, 22 in group B and 45 in group C. The incidence in grandmulti was 2.2%, 0.76% in group B and 0.66% in group C. Bhan reported maternal death in grandmulti in 1.2% Krebs (1954) 2.2%, Dey (1974) 2%, Silverstein 0.2%. The causes of death were as shown in Table III.

TABLE III
Causes of Death in Grandmulti

Cause	No. of cases	
Ruptured ut.	2	
Central placenta praevia with severe anaemia	2	} Haemorrhagic shock
Afibrinogenemia	2	
P.P.H.	3	
Retained placenta	1	
Toxaemia of pregnancy	3	
Septicaemia	2	
Hepetic coma	3	
Total	18	2.2%

Summary

1. This is a study of obstetric behaviour 816 grandmultipara admitted to the obstetric department, of Irwin Group of Hospitals, Jamnagar during the three year period from January 1976 to December 1978. Patients admitted during the same time 2892 primi and 6801 multigravida with parity less than five were taken for comparison.

2. Incidence of grandmultiparas was 7.76%.

3. The age of grandmultipara varied from 25 to 45 years.

4. Almost all complications of pregnancy and labour were observed to be higher in grandmultipara than other women.

5. 91% of grandmulti had spontaneous labour, 8.82% required various type of artificial intervention.

6. 12.62% of grandmultipara had premature babies and 8.7% had still birth.

7. Maternal mortality in grandmulti was 2.2%.

It can be concluded that in comparison to other patients grand multiparas run a greater risk during pregnancy and labour. This risk can be effectively reduced with good antenatal care but still they are liable to serious complications of pregnancy which can lead to higher maternal and foetal mortality. Prevention is always better than cure and hence grandmultiparity should be prevented by effective family planning measures, increasing the level of education and removal of old social stigmas.

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