

Original Research Article

Estimation of various associated factors in multiparous females undergoing primary caesarean sections at a tertiary care health centre in rural Western Maharashtra, India

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ABSTRACT

Background: Caesarean section is one of the commonly performed operation in women due to safety reason and modern techniques. Primary caesarean section in the multipara means first caesarean section done in the patients who had previously delivered vaginally once or more. Aims and objectives of this study were to know association of various parameters like Age, Parity, Haemoglobin, Blood Pressure, Baby weight, Perinatal and Maternal Mortality with primary caesarean section among multipara.

Methods: This was a prospective study of primary caesarean section in multipara women admitted at tertiary care hospital in western rural Maharashtra during the period of 6 months from January 2018 to June 2018. Multipara with pregnancy of >28 weeks gestation (gravida 2 and above), each of whom has had a previous vaginal delivery of >20 weeks gestation were included. Women with previous abortions and previous section were excluded.

Results: Total 1705 sections were performed during the same period out of total 4648 deliveries. Out of these sections 194 sections were performed in multipara for the first time. Maximum numbers of patients (58%) were in the age group of 15-24 years and Parity 2 (68%). Almost 70% women among multipara have Hb <11 Mgm/dl. Most of the patients (84.53%) have normal Blood pressure readings. Most of the babies' i.e. 70 (36.08%) have birth weight in the range of 2.5-3 kg. Out of 194 deliveries, there were only 3 neonatal deaths (1.54%) and 1 maternal death (0.51%).

Conclusions: Proper antenatal and intrapartum care and early referral can reduce the maternal and perinatal morbidity and mortality in multipara.

Keywords: Age, parity, Multipara, Perinatal and maternal mortality, Primary caesarean section

INTRODUCTION

The rate of caesarean sections has increased worldwide.¹ This is because of the safety of caesarean sections, which has become possible because of the advances in antibiotics, blood transfusion, anaesthesia, antiseptics and asepsis.

Factors for rising caesarean section are identification of risk foetuses before term (IUGR), Identification of at risk

mothers, Wider use of repeat caesarean sections in cases with previous caesarean sections, rising rates of induction of labour which may subsequently fail, decline in operative vaginal delivery like forceps, decline in vaginal breech delivery, increased number of women with age more than 30 yrs and associated medical complications, Adoption of small family norms due to which neither the obstetrician nor the patients are ready to accept any risk of abnormal labour, wider use of electronic foetal monitoring and increased diagnosis of foetal distress.

Caesarean section is considered as a safer approach rather than difficult vaginal deliveries in order to reduce maternal and perinatal morbidity and mortality.² However, mortality and morbidity may occur after the caesarean section from the fact that risks are related to the skill and experience of the surgeon, the quality of care from supporting staff, especially those in anaesthesia and the characteristics of the mother.³

Multipara means those who had delivered one or more foetuses after the age of viability i.e 28 weeks.⁴ Primary caesarean section in the multipara means first caesarean section done in the patients who had previously delivered vaginally once or more.

It is a common belief amongst common public that once a mother delivers her child normally, all her subsequent deliveries will be normal. As a result, such multiparous mother often neglects routine antenatal checkup.⁵ Because of this attention has been directed to the indication for caesarean section in women who have previously delivered vaginally.⁶

Present study has been planned to study the correlation of Age, Parity, Haemoglobin, Blood Pressure, Baby weight, Perinatal and Maternal mortality with primary caesarean section among multipara in tertiary rural hospital.

Aims of the study were to estimation of association of age, parity haemoglobin, Blood pressure and Baby weight with incidence of primary caesarean section among multiparae, to study perinatal and maternal outcomes following caesarean section. to know the Incidence of post-operative morbidity.

METHODS

This was a prospective observational study of all the cases of primary caesarean section in multipara admitted at tertiary care hospital serving rural population of India. Study was conducted after obtaining permission from institutional ethics committee.

Inclusion criteria

- Multigravida with pregnancy of >28 weeks gestation (gravida 2 and above), each of whom has had a previous vaginal delivery of >20 weeks gestation.

Exclusion criteria

- Women with previous caesarean sections.

Study Period was Period of 6 months from January 2018 to June 2018.

Multipara with Primary caesarean section after fulfilling inclusion and exclusion criteria were selected for the study. Study was started after obtaining their prior written informed consent.

Information was collected in a predesigned proforma about demographic profile, physical examination, indication of cesarean section, maternal and perinatal outcome, Hb level and Blood Pressure. Detailed history including present pregnancy and past obstetric history were taken. Biometry and biophysical profile assessed by ultrasound. Labour monitoring was done by partogram and fetal heart monitoring done by Cardiotocograph. Decision for caesarean section was based on clinical evaluation of progress of labour, fetal condition, and also maternal condition. Type of anaesthesia was decided by the anesthetist. All intraoperative details were noted, and complications managed promptly. All cases were attended by pediatrician. Postoperative period was monitored, and all complications were managed promptly. The newborns were examined daily, and any complication noted and managed accordingly. Patients with uneventful postoperative period were discharged on Post Caesarean Day-5.

Statistical analysis

The data were collected and tabulated into excel sheet and SPSS software data variable All statistical analyses were expressed in percentages (%).

RESULTS

Total no. of deliveries in this period were 4648.Total 1705 sections were performed during the same period. Thus, the incidence caesarean sections is 36.68%. Out of these sections 194 sections were performed in multipara for the first time, thus giving the incidence of 0.42% of total deliveries and 11.38% of total caesarean sections.

Table 1: Age incidence among multiparous women with previous caesarean section.

Age group	No. of cases	Percentage
15 to 24 years	112	58%
25 to 34 years	74	38%
35 yrs and above	8	4%
Total	194	100%

Table no.1 shows that majority of the cases of women with Primary caesarean section, 112 ie.58% were in the age group of 15 to 24 years followed by 74 cases (38%) in age group of 25 to 34 years while only 8 number of patients were 35 years and above (4%).

Table 2: Parity Incidence among Multiparous women with Previous caesarean section.

Parity	Number of cases	Percentage
2	132	68%
3	42	21.65%
4	20	10.30%
Total	194	100%

Table no. 2 shows that most of the patients belong to para 2 (68%) followed by para 3 (21.65%) and para 4 (10.30%). Parity or "para" indicates the number of pregnancies reaching viable gestational age (including live births and stillbirths). The number of fetuses does not determine the parity. Twin pregnancy carried to viable gestational age is counted as 1.

Table 3: Hb estimation among multiparous women.

Hb	Number of cases	Percentage
>11gm/dl	58	30%
9-11gm/dl	88	45.36%
7-9 gm/dl	40	20.61%
< 7 gm/dl	8	4.1%
Total	194	100%

Table No. 3 shows that 58 patients had Hb level more than 11gm/dl ie.30% of total patients.88 patients had Hb level between 9 to 11gm/dl ie.45.36% of total patients.40 patients had Hb level between 7 to 9 gm/dl ie.20.61% of total patients while only 8 patients had Hb level of less than 7 gm/dl.

Table 4: BP levels among multiparous women.

BP	Number of cases	Percentage
Normal (systolic bp <130 and diastolic bp <80 mm of hg)	164	84.53%
More than normal but <140/90 mm of hg	8	4.12%
>140/90 but <160/110 mm of hg	21	10.82%
>160/110 mm of hg	1	0.51%
Total	194	100%

Table 4 shows that 164 patients have normal BP readings i.e. Systolic BP <130 and Diastolic BP <80 mm of Hg. 8 (4.12%) patients had more than normal BP but <140/90 mm of Hg. 21 (10.82%) patients had BP >140/90 mm of Hg but <160/110 mm of Hg. Only one patient had BP >160/110 mm of Hg.

Table 5: Baby weight among multiparous women.

Baby weight	Number of cases	Percentage
<1.5 kg	5	2.5%
1.5-2 kg	28	14.43%
2-2.5 kg	61	31.44%
2.5-3 kg	70	36.08%
>3 kg	30	15.46%
Total	194	100%

Table No. 5 shows that most of the babies i.e.70 (36.08%) have birth weight in the range of 2.5-3 kg. This is followed by babies (31.44%) with birth weight in the

range of 2-2.5 kg. Only 5 babies (2.5%) have birth weight < 1.5 kg. #0 babies (15.46%) have birth weight >3 kg.

Perinatal mortality- In this study there were 3 neonatal deaths. First baby died of Hypoxic Ischaemic Encephalopathy after emergency caesarean section done for foetal distress. Second baby died of Congenital Heart Disease after emergency caesarean section done for foetal distress. Third baby died of sepsis and prematurity after emergency section for severe pre-eclampsia.

Maternal Mortality- There was only one maternal death in this study. Patient underwent section for Abruption placentae and HELLP syndrome and died in intensive care unit after one week. She had no ANC checkup in last 2 months of pregnancy.

DISCUSSION

In the present study, total 4648 deliveries were conducted in hospital over a period of 6 months from January 2018 to June 2018. Out of these, total 1705 (36.68%) were conducted by LSCS. Out of these sections 194 sections were performed in multipara for the first time,thus giving the incidence of 0.42% of total deliveries and 11.38% of total caesarean sections.

Out of 194 patients, most of the patients (58%) were in the age group of 15-24 years followed by 74 cases (38%) in age group of 25 to 34 years. Similar results were also seen in study conducted by P Himabindu et al, Rama Devi et al.^{1,7} This is because of the early marriages and early childbearing in rural area. Similarly, family is complete at early age.

Distribution of patients according to parity shows that most of the patients (68%) were Para-2 followed by Para-3 (21.65%). It shows that in the past few years' family size has been reduced from 5-6 children per couple to 2-3 children per couple. Grand multiparity has been significantly reduced in the past few years. Sethi P et al, and Rajput N et al, also reported the similar results.^{8,9}

Table No.3 clearly shows that almost 70% women have Hb <11 gm/dl. This is because multiparity is significantly associated with reduced iron store and more blood loss in every delivery. As per Table No.4, 22 patients have BP >140/90 mm of Hg which indicates that pre-eclampsia may be the common occurrence among multipara.

Table No.5 shows that most of the babies i.e.70 (36.08%) have weight in the range of 2.5-3 kg which is considered to be normal body weight while about 94 babies have birth weight <2.5 kg. Improper maternal nutrition and antenatal care could be the cause for birth weight <2.5 kg in this study.¹⁰

Out of 194 deliveries, there were only 3 neonatal deaths (1.54%) and 1 maternal death (0.51%) in this study which clearly shows that reduced perinatal and maternal

mortality. Mortality rate at tertiary care hospitals is less because of good antepartum and intrapartum care.

CONCLUSION

Multipara woman in labour requires the same antenatal and intrapartum care as that of primigravida. Proper antenatal and intrapartum care and early referral can reduce the maternal and perinatal morbidity and mortality in multipara.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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