



## Evaluation of Causes and Complications of Primary Cesarean Section in Multigravida in Tertiary Care Hospital

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### Abstract

**Background:** Primary caesarean section (CS) in the multigravida means first CS done on a woman who had previously delivered vaginally at least once after the period of viability.<sup>1</sup> Cesarean section was mainly evolved as a life saving procedure for both mother and fetus during difficult delivery.<sup>2</sup> With the passage of time there has been a change in the indications for caesarean section and there is worldwide increase in rate of both primary and repeat caesarean sections.<sup>3</sup>

**Aims & objectives:** The aims of this study were to study the indications and complications of primary caesarean in multiparous women.

**Materials & Methods:** The present prospective observational study was conducted in Maternity Hospital, Department of Obstetrics and Gynecology SKIMS Srinagar on 150 patients over a period of 1 year. The patients included were all singleton and term multipara women undergoing primary caesarean. Primigravida, women with previous LSCS, twin pregnancies and women with scarred uterus were excluded from the study.

**Results:** A total of 150 patients were enrolled in our study. The most common age group was 31-35 years (60.5%). 80% of the patients underwent emergency caesarean section and 30% had elective caesarean section. Majority of patients (61.3%) were directly received in our labour room in labour without prior admission. 81% patients had medical co-morbidities. Most common indication for caesarean in our study was fetal distress accounting for 28.6% of the cases, followed by preeclampsia/eclampsia (15.3%). Most common intraoperative finding was meconium stained liquor (34.2%) followed by distended lower segment (25.7%). Intra operative complications were noted in 9.3% of cases, most common complications being PPH in 4% of cases. Post-operative morbidity was observed in 14.6% of cases which includes abdominal distension in 4.7% of cases, wound infection and fever in 2.6% of cases each, urinary tract infection in 2%, wound dehiscence 1.3%, DVT and psychosis in 0.7% of cases each.

**Conclusion:** This study reemphasizes that there should be detailed antenatal counselling of the multigravida women regarding their diet, risk factors, family planning and regular hospital visits, so that anticipated complications can be prevented.

**Key words:** Complications, Multigravida, Indications, Primary caesarean section.

## Introduction

Primary caesarean section in the multigravida means first Cesarean section (CS) done on a woman who had previously delivered vaginally at least once after the period of viability.<sup>1</sup> Multiparous women neglect their standard antenatal checkups<sup>2</sup>, because they assume that previously they have delivered normally so the present delivery will be normal and without complications, which is not true. A multipara who has earlier delivered vaginally may still require a caesarean section for safe delivery.<sup>1</sup> These women prefer to deliver at home. Cesarean section was mainly evolved as a life saving procedure for both mother and fetus during difficult delivery.<sup>3</sup> With the passage of time there has been a change in the indications for caesarean section and there is worldwide increase in rate of both primary and repeat caesarean sections.<sup>4</sup> The World Health Organization recommends that the caesarean section rate should not be higher than 10% to 15%.<sup>5</sup> Cesarean section poses a greater risk of maternal morbidity, mortality and high cost of health care compared with vaginal deliveries, hence it is important to assess the several indications and maternal outcome associated with a caesarean delivery.<sup>6</sup> The indications of caesarean section in multipara women are not limited to the obstetric and medical factors, but also extend to various socioeconomic, ethical, and medicolegal factors resulting in an alarming increase in caesarean section rate all over the world.<sup>7</sup>

## Aims and Objectives

1. To assess the indications of primary caesarean section in a multigravida.
2. To assess the antenatal, intranatal and postnatal complications in multigravida.

## Material and Methods

The present prospective observational study was conducted in Maternity Hospital, Department of Obstetrics and Gynecology SKIMS Srinagar on 150 patients over a period of 1 year. The patients included were all singleton and term multipara women undergoing primary caesarean. Primigravida, women with previous LSCS, twin pregnancies and women with scarred uterus were excluded from the study. The patients reporting directly to labor room in various stages of labor, women referred from peripheries and those who were admitted in the wards and taken up for elective lower segment caesarean section were assessed by taking detailed history and examination. USG was also done to assess the maturity, presentation, estimated fetal weight, amount of liquor and placental localization. Amongst patients presenting directly to labor room, some patients were first induced and subjected to trial of labor and then subsequently were operated upon. Some were taken directly for LSCS. All the patients taken up for study were followed up till they were discharged from the postoperative wards.

## Statistical analysis

For data analysis Microsoft excel, Microsoft word and statistical software SPSS were used and data were analyzed with the help of frequencies, percentage, tables, proportions, and appropriate statistical tests.

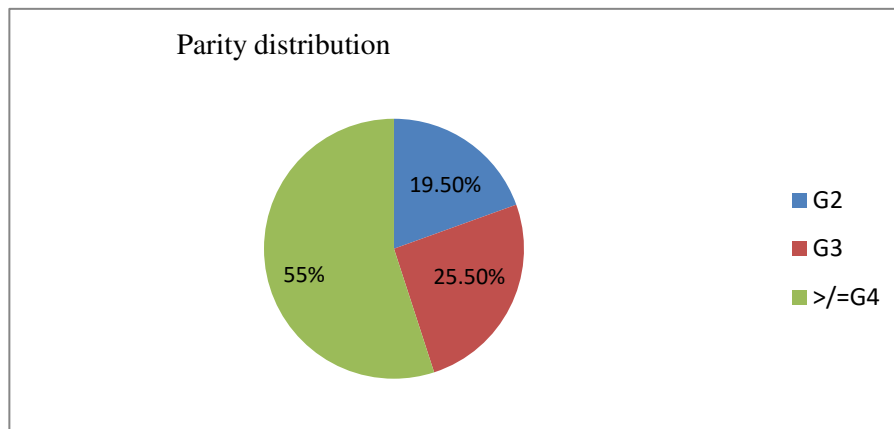
## Results and Analysis

1:Age distribution.

Age in years	Frequency	Percentage
20- 25 years	12	8
26 - 30 years	31	20.7
31 - 35 years	91	60.5
Above 35 years	16	10.8
Total	150	100.0

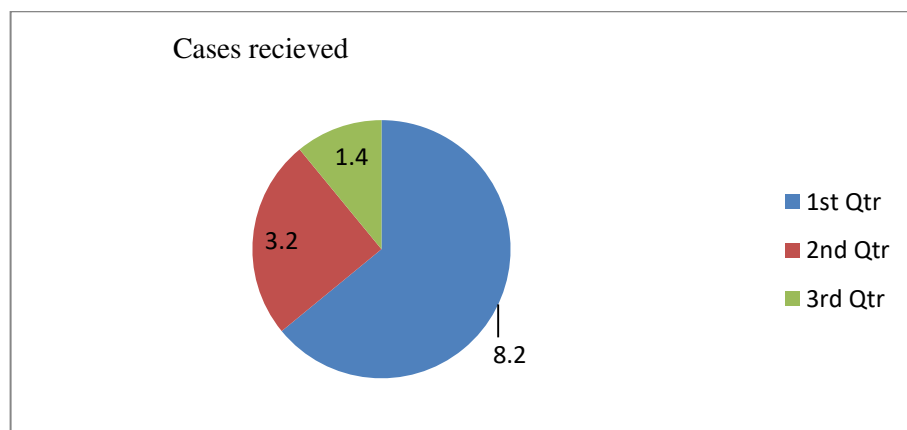
The above table shows that the most common age group was 31-35 years (60.5%).

2: Parity Distribution.



In our study most of primary cesarean sections were done on  $\geq 4^{\text{th}}$  gravida who constituted 55%, followed by 3<sup>rd</sup> gravida constituting 25.5% and it was observed that incidence in 2<sup>nd</sup> gravidas was 19.5%.

3: Types of cases received.



Majority of patients( 61.3%) were directly received in our labour room without prior admission,32.1% were admitted and 6.6% of cases were referred from periphery hospitals.

4:Time since last child birth

Last child birth	Frequency	Percentage
<1 year	21	14
2-5 years	90	60.2
5-10years	32	21.2
Above 10 years	7	4.6
Total	150	100.0

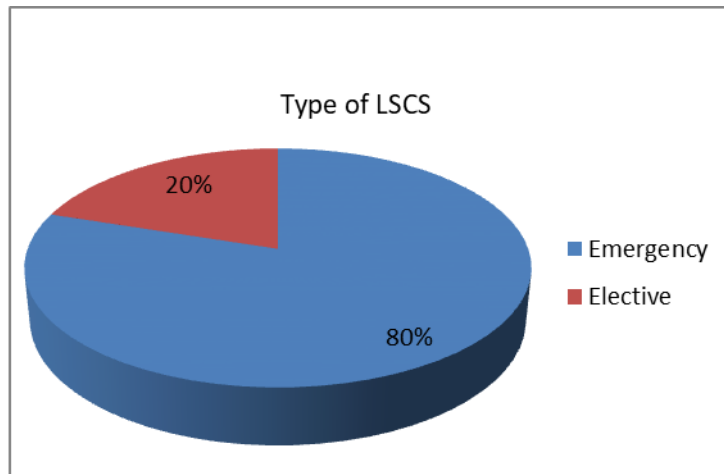
Above table shows that majority (60.2%) of women had last child birth 2-5 years before.

5:Maternal Medical Conditions.

Medical Conditions	Frequency	Percentage
Gestational Hypertension	22	27.1
Anaemia	16	18.2
Gestational Diabetes	12	15.5
Hypothyroidism	10	12.3
Cholestasis of pregnancy	8	10.2
Asthma	7	9
Epilepsy	4	5
SLE	2	2.7
Total	81	100

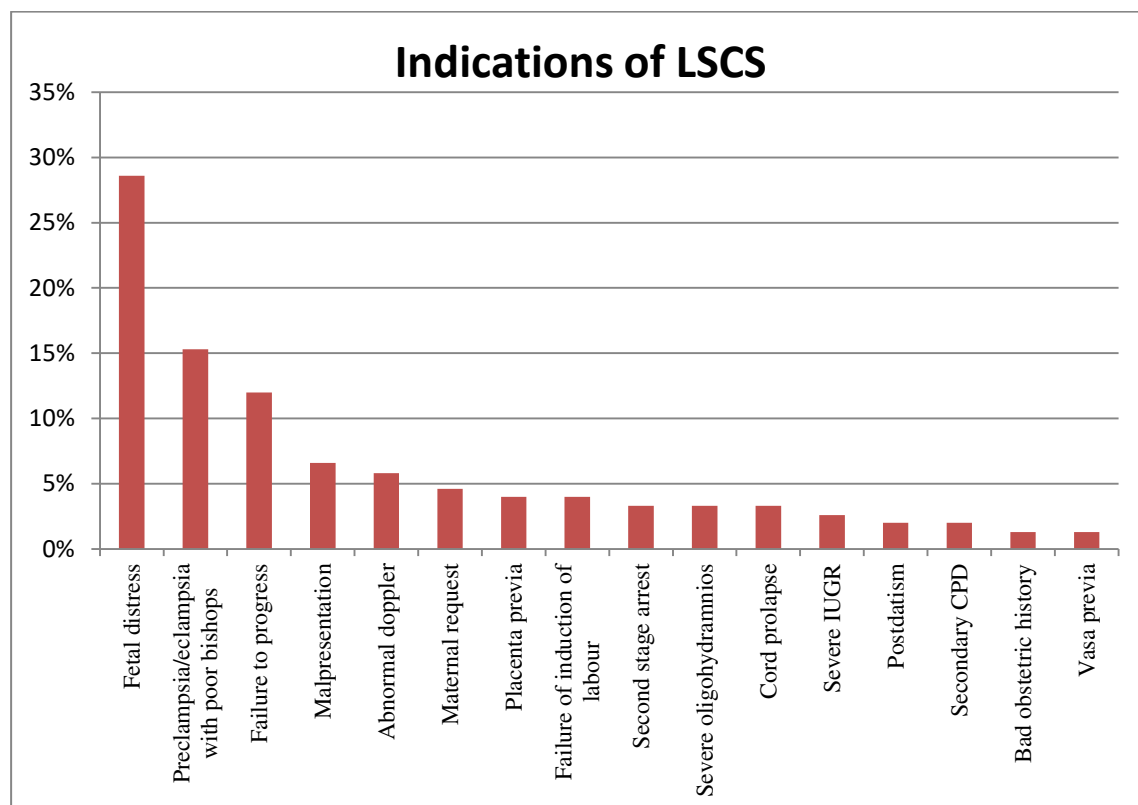
Above table shows that 81% patients had medical co-morbidities. The most common co-morbidity was Gestational Hypertension(27.1%) followed by anemia(18.2%).

6: Type of cesarean section.



Emergency LSCS was done in 80% of the patients and elective LSCS in 20% of cases.

7: Indications for cesarean section.



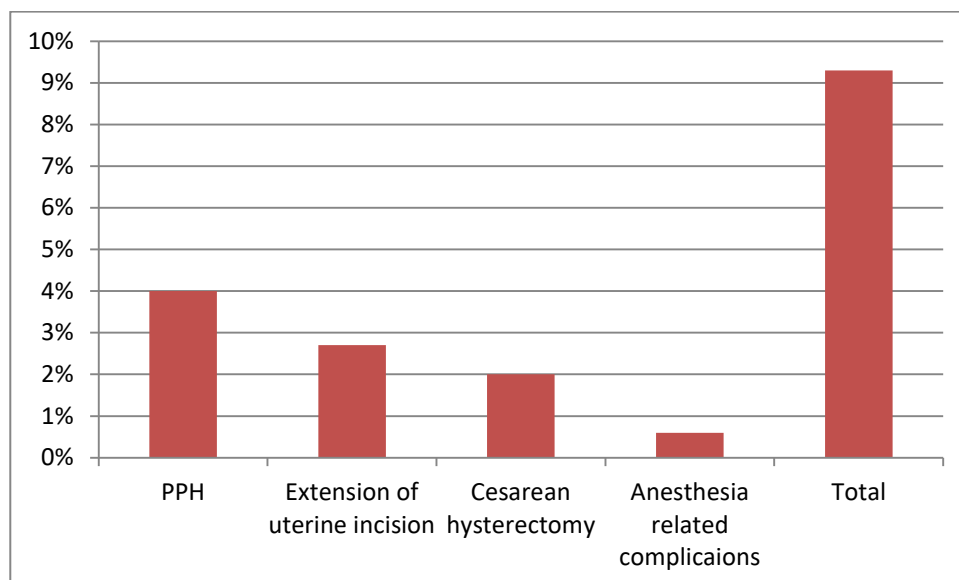
The most common indication for cesarean in our study was fetal distress accounting for 28.6% of the cases, followed by preeclampsia/eclampsia with poor bishops in 15.3%, failure to progress in 12%, malpresentation in 6.6%, abnormal doppler in 5.8%, maternal request in 4.6%, placenta previa and failure of induction in 4% of cases each, second stage arrest, severe oligohydramnios and cord prolapse in 3.3% of cases each, severe IUGR in 2.6%, postdatism and secondary CPD in 2% of cases each, Bad obstetric history and vasa previa in 1.3% of cases each.

8: Intraoperative findings.

Intra op findings	Frequency	Percentage
Meconium stained liquor	12	34.2
Distended uterine lower segment	9	25.7
Edematous bladder	6	17.2
Retroplacental clots	4	11.4
Caput formation	3	8.5
Impending uterine rupture	1	3
Total	35	100

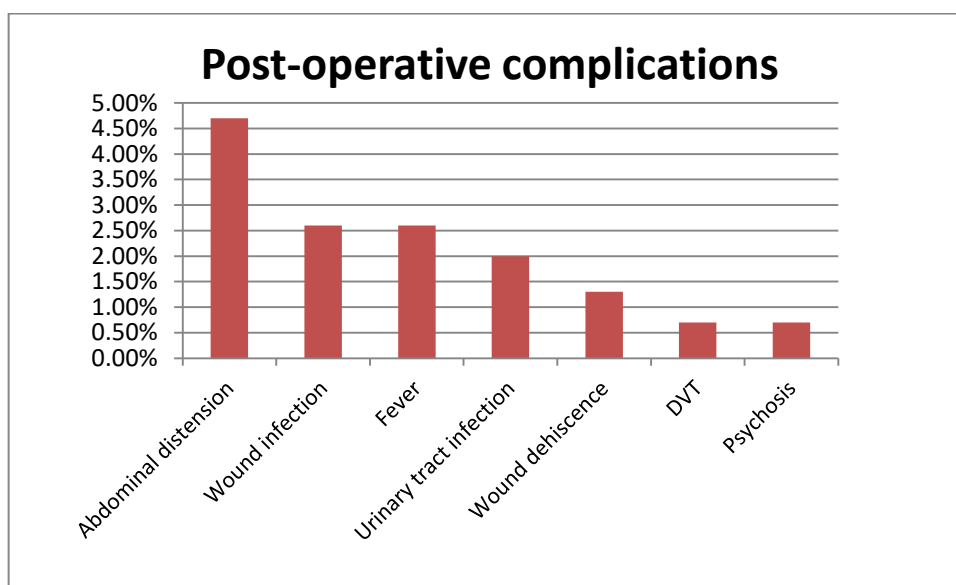
Above table shows most common intraoperative finding was meconium stained liquor(34.2%) followed by distended lower segment (25.7%).

9: Intra-operative complications



Intra operative complications were noted in 9.3% of cases, most common complications being PPH in 4% of cases, extension of uterine incision in 2.7% of cases, cesarean hysterectomy in 2%, and anesthesia related complications in 0.6% of cases.

10: Post operative complications.



Post-operative morbidity was observed in 14.6% of cases which includes abdominal distension in 4.7% of cases, wound infection and fever in 2.6% of cases each, urinary tract infection in 2%, wound dehiscence 1.3%, DVT and psychosis in 0.7% of cases each.

**Discussion**

A total of 150 patients were enrolled in our study. The incidence of primary cesarean section in multigravida in our study was 4.1% which was higher than the study conducted by Sharmila G et al (3%).<sup>8</sup> This is due to referral of cases to our tertiary centre for surgery, complicated cases and caesarean delivery on maternal request. The most common age group was 31-35 years (60.5%) which was in contrast to study done by MD Munusamy *et al*<sup>9</sup> in which 60.2% of cases were in the age group of 20-25 years. The reason being late marriages in our setting. In our study most of

primary cesarean sections were done on  $\geq$  4th gravida who constituted 55%, followed by 3rd gravida constituting 25.5% and it was observed that incidence in 2nd gravidas was 19.5%, which was in contrast to the study done by Rajput N *et al* where majority of cases were 2<sup>nd</sup> gravida (49.72%).<sup>10</sup> In our study 80% of the patients underwent emergency cesarean section and 30% had elective cesarean section. These findings were in close proximity to a study done by Al Rowaily *et al*, where two-thirds were emergency cesarean sections, and one-third were elective cesarean sections.<sup>11</sup> Majority of patients (61.3%) were directly received in our labour room without prior admission, 32.1% were admitted and 6.6% of cases were referred from periphery hospitals. 81% patients had medical co-morbidities. The most common co-morbidity was Gestational Hypertension (27.1%) followed by anemia (18.2%). The most common indication for cesarean in our study was fetal distress accounting for 28.6% of the cases, followed by preeclampsia/eclampsia with poor bishops in 15.3%, failure to progress in 12%, malpresentation in 6.6%, abnormal doppler in 5.8%, maternal request in 4.6%, placenta previa and failure of induction in 4% of cases each, second stage arrest, severe oligohydrannios and cord prolapse in 3.3% of cases each, severe IUGR in 2.6%, postdatism and secondary CPD in 2% of cases each, Bad obstetric history and vasa previa in 1.3% of cases each. Himabindu P *et al.* (2014)<sup>12</sup> did a study which showed fetal distress (24.7% of cases) as a most common cause of primary caesarean section followed by malpresentation in 19.3% of cases. The reason for preeclampsia/eclampsia with poor bishops being the second most common indication in our study is explained by the fact that majority of the women included in our study had higher age group(31-35 years).Increasing age increases the risk of Gestational Hypertension, preeclampsia & eclampsia. Most common intraoperative finding was meconium stained liquor(34.2%) followed by distended lower segment (25.7%). Intra operative complications were noted in 9.3% of cases, most common complications being PPH in 4% of cases which is less than the results of other studies.<sup>12,13</sup> Post-operative morbidity was observed in 14.6% of cases which includes abdominal distension in 4.7% of cases, wound infection and fever in 2.6% of cases each, urinary tract infection in 2%, wound dehiscence 1.3%, DVT and psychosis in 0.7% of cases each.

### Conclusion

This study reemphasizes that there should be detailed antenatal counselling of the multigravida women regarding their diet, risk factors, family planning and optimum hospital visits, so that anticipated antenatal, intranatal and postnatal complications can be prevented.

**Conflict of Interest:** None

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