

Study of indications of primary cesarean section in multigravida patients: A retrospective study



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Submission: 06-03-2022

Revision: 04-06-2022

Publication: 01-07-2022

ABSTRACT

Background: Caesarean section is one of the most widely performed surgical procedures in obstetrics worldwide. It was mainly evolved as a lifesaving procedure for mother and foetus during the difficult delivery. Multiparous means those who had delivered once or more after the age of viability. It includes multipara (para 2, 3, 4) and grand multipara (para more than 4). Primary Caesarean section in the multipara means first Caesarean section done in the patients who had delivered vaginally once or more. **Aims and Objectives:** The aims of this study were to study the indications for the primary cesarean section in multigravida women at tertiary care center, Medical College Jhalawar. **Materials and Methods:** Retrospective record-based study of all primary cesarean section in multigravida women admitted at Janana Hospital, Medical college Jhalawar during the period of 3 months. Retrospective analysis of case sheet was done in parous women who had previous vaginal deliveries. Inclusion criteria were all multigravida who went for the lower segment cesarean section (LSCS). **Results:** During the study period of 3 months, total 1968 deliveries occurred, out of which 806 (40.95%) underwent cesarean section and 208 (25.80%) among these cesarean sections were underwent primary cesarean section in multigravida. Maximum number of the patients were in the age group of 25–30 years 120 (57.69%). Maximum number of patients were gravida 2 (G2) 135 (63.67%) and gravida 3 (G3), 52 (24.52%). Almost all of them (96.63%) underwent emergency cesarean section. The most common indication for the primary LSCS in multigravida patients was fetal distress 46 (22.11%) followed by malpresentation 38 (18.26%) cases, meconium stained liquor with fetal distress 23 (11.05%), severe oligohydramnios 15 (7.21%), non-progress of labor 13 (6.25%), pre-eclampsia and big baby 8 (3.84%) each, elective CS with bad obstetric history, obstructed labor and placenta praevia 7 (3.36%) each, APH and cephalopelvic disproportion 6 (2.28%) each, and PIH 5 (2.24%). **Conclusion:** The most common indication for the primary LSCS in multigravida patients was fetal distress 46 (22.11%) followed by malpresentation 38 (18.26%) cases in our study.

Key words: Indications; Multigravida; Primary cesarean section

INTRODUCTION

Cesarean section is one of the most widely performed surgical procedures in obstetrics worldwide. It was mainly evolved as a lifesaving procedure for mother and fetus during the difficult delivery.¹ Multiparous means those who had delivered once or more after the age of viability. It includes multipara (para 2, 3, 4) and grand multipara (para

more than 4).² Primary cesarean section in the multipara means first cesarean section done in the patients who had delivered vaginally once or more. Mainly, the baby and the placenta are responsible for cesarean section in multipara. Multipara may still have cephalopelvic disproportion even having previously delivered a full term child vaginally. Since the fetus increases in size with multiparity, the size of fetus and fetal head should be carefully estimated. In multiparous

Access this article online

Website:

<http://nepjol.info/index.php/AJMS>

DOI: 10.3126/ajms.v13i7.43663

E-ISSN: 2091-0576

P-ISSN: 2467-9100

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patients, malpresentations are favored by a pendulous abdomen and lordosis of the lumbar spine and in any case that is usual for the head not to engage in the pelvis until the onset of labor.³ There are several indications of cesarean sections, chiefly severe contraction of the pelvis, major degree of placenta previa, and severe preeclampsia and eclampsia.⁴ The other indications include fetal distress, bad obstetric history (BOH) and difficult vaginal operative delivery, APH, PIH, Big baby, twin pregnancy, IUGR, induction failure, and post-dated pregnancy. However, the indications of cesarean section are not limited to the obstetrics and medical factors, but also extend to various socioeconomic, ethical, and medicolegal factors resulting in an alarming increase in cesarean section rate all over the world.⁵ The present study was done to study the indications of the primary cesarean section in multigravida who had earlier delivered successfully by vaginal route.

Aims and objectives

To study the indications for primary Caesarean section in multigravida women at tertiary care center, Medical College Jhalawar.

MATERIALS AND METHODS

It was a retrospective, descriptive record-based study of all the cases of the primary cesarean section in multigravida patients admitted at the Department of Obstetrics and Gynecology, Janana Hospital, Medical College Jhalawar during a period of 3 months (January 2021 to March 2021). Total 208 patients were included in the study.

Inclusion criteria

Multigravida with pregnancy of >28 weeks gestation (gravida 2 and above), each of whom has had a previous vaginal delivery of viable fetus, and multiple pregnancy (twins) and pregnancy with medical disorders were included in the study.

Exclusion criteria

The following criteria were excluded from the study:

1. All Primiparous women undergone lower segment cesarean section (LSCS) during the study period
2. Women with previous abortions and previous cesarean sections
3. Women with previous uterine surgery
4. Women with the previous hysterectomy.

Retrospective analysis of selected case sheet (after applying inclusion and exclusion criteria) was done, of a case of parous women who were undergone cesarean section and had previous vaginal deliveries. The permission from the ethical committee and medical record department of

Jhalawar medical college, Jhalawar was taken before starting the study. For data collection, information was collected in a paper-based study pro forma about demographic profile, obstetric history, antenatal history, intraoperative details, maternal, and fetal outcome which were recorded from the case sheet/history documents. Various indications of LSCS according to case sheet were noted. All the selected cases were recorded in a master chart.

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, measures of central tendency, and appropriate statistical tests.

Ethical clearance

The study was pre-approved by the Institutional Ethics Committee (IEC), Jhalawar Medical College, Jhalawar, for the final permission. After obtaining the permission of IEC, the study was conducted.

RESULTS

During the study period of 3 months, total 1,968 deliveries occurred, out of which 806 (40.95%) underwent cesarean section and 208 (25.80%) multigravida were underwent primary cesarean section. Maximum number of the patients was in the age group of 25–30 years 120 (57.69%) (Table 1). Maximum number of patients were gravida 2 (G2) 135 (63.67%) and gravida 3 (G3), 52 (24.52%), and rest were gravida 4 (G4) (7.54%) and gravida 5 and above (G5, G6) (4.24%) (Table 2). Almost all of them (96.63%) underwent emergency cesarean section. The most common indication for the primary LSCS in multigravida patients was fetal distress in 46 (22.22%) cases followed by malpresentation in 38 (18.36%) cases, meconium-stained liquor with fetal distress 23 (11.05%), severe oligohydramnios 15 (7.21%), non-progress of labor 13 (6.25%), pre-eclampsia and big baby 8 (3.84%) each, elective CS with BOH, obstructed labor and placenta previa 7 (3.36%) each, APH and cephalopelvic disproportion 6 (2.88%) each, PIH 5 (2.24%), post-dated, GHTN 4 (1.92%) each, and other indications included IUGR, twin pregnancy, induction failure, placental abruption, and eclampsia in 11 (5.28%) cases (Table 3).

DISCUSSION

Multiparity is a problem associated with poverty, illiteracy, ignorance, and lack of knowledge of the available antenatal care and family planning methods. It was a retrospective record-based study of all the cases of the primary cesarean section in multigravida patients admitted

Table 1: Distribution according to age (n=208)

Age Group	Number of Cases	Percentage
18–24 Years	31	14.90
25–30 Years	120	57.69
>30 Years	57	27.40

Table 2: Distribution according to Gravida status (n=208)

Gravida Status	Number of Cases	Percentage
G2	131	63.67
G3	52	24.52
G4	16	7.54
G5 and above	9	4.24
Total Patients	208	

Table 3: Distribution according to indication of LSCS (n=208)

Indication of LSCS	Number of Cases	Percentage
Fetal Distress	46	22.21
Malpresentation (breech presentation/oblique lie/transverse lie)	38	18.26
MSL with fetal distress	23	11.05
Severe oligohydramnios	15	7.21
Antepartum hemorrhage (abruption/placenta previa)	15	7.21
Non-progress of labor	13	6.25
Pre-eclampsia/eclampsia	11	5.28
Obstructed labor	7	3.36
Big baby	8	3.84
BOH/precious pregnancy (elective)	7	3.36
Cephalopelvic disproportion	6	2.88
PIH	5	2.40
Post-dated	4	1.92
Gestational hypertension	4	1.92
IUGR	2	0.96
Twin pregnancy	2	0.96
Induction failure	2	0.96

LSCS: Lower segment cesarean section, BOH: Bad obstetric history

at the Department of Obstetrics and Gynecology, Janana Hospital, Medical College Jhalawar during a period of 3 months (January 2021 to March 2021). During the study period of 3 months, total 1968 deliveries occurred, out of which 806 (40.95%) underwent cesarean section. Himabindu et al., found a comparable cesarean section rate of 40% in her study.⁶ 208 (25.80%) multigravida were underwent primary cesarean section. The primary cesarean section rate among multiparous women was 25.80%. Desai et al., found a comparable primary c-section rate (29.05%) in multiparous.⁷ The most common indication for the primary LSCS in multigravida patients was fetal distress in 46 (22.22%) cases in our study, which was comparable to study done by Himabindu et al., (24.7%),⁶ Ramavath et al., (19%),⁸ and Rajput et al., (18.39%).⁹ Malpresentation was the indication in 38 (18.36%) cases in present study, comparable to study done by Himabindu

et al., (19.3%),⁶ Desai et al., (17.44%),⁷ and Ramavath et al., (14%).⁸ Thick meconium stained liquor was the indication in 11.05% cases in present study. Somalwar et al.,¹⁰ found this indication in 13% cases which were comparable to present study. Severe oligohydramnios was the indication in 7.21% cases in the present study. Other studies show higher percentage Ramavath et al., (14%)⁸ and Devi et al., (12.01%).¹¹ Ante partum hemorrhage was the indication of C-section in 7.21% of cases in the present study. Somalwar et al.,¹⁰ found this indication in 5% cases. Other studies show higher percentage Desai et al., (22.09%),⁷ Rao et al., (19.5%),¹² and Himabindu et al., in 19.3% cases.⁶ Cephalopelvic disproportion was the indication in 2.88% cases comparable to study done by Himabindu et al., (3.2%) cases.⁶ Other studies show higher percentage Desai et al., (19.77%),⁷ Devi et al., (15.90%),¹¹ and Preeti et al., found 8.3¹³ cases of this indication. Pre-eclampsia/eclampsia was the indication in 5.28% cases in the present study, which was comparable to study by Hangarga and Yattinamani (4.27%).¹⁴ Obstructed labor was the indication in 3.36% cases in the present study, comparable to study done by Saluja et al., (4.0%).¹⁵

Limitations of the study

Limitations of this study that it was a purely record based study and the sample size was small for this study.

CONCLUSION

The most common indication for the primary LSCS in multigravida patients was fetal distress 46 (22.11%) followed by malpresentation 38 (18.26%) cases in our study. Many unwanted complications occur in women who previously had a normal vaginal delivery. Increasing parity is associated with high incidence of complications in antepartum, intrapartum, and postpartum periods. Regular antenatal checkups should be done to identify high-risk pregnancy. Hence, all multigravida women need to be informed about the importance of antenatal care and mandatory hospital delivery to improve fetal and maternal outcome.

ACKNOWLEDGMENT

Authors are thankful to the Medical record Department of Jhalawar Medical College who gave data for the study.

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Authors' Contributions:

NM- Concept and design of the study, prepared first draft of manuscript; **SP**- collected data from MRD and prepared master chart; **TN**- Interpreted the results; reviewed the literature; **NKM**- Concept, coordination, statistical analysis and interpretation, and preparation of complete article.

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Source of Funding: None, **Conflicts of Interest:** None.