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# A study to assess major indications and outcome of lower segment cesarean section in hospital setting

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***Abstract*---**The caesarean rate is substantially greater in India as compared to other regions of the world. The rising caesarean rate has contributed in greater socioeconomic strain on health care and also increased maternal morbidity. Jammu & Kashmir, Punjab, Haryana, Rajasthan, Orissa, Madhya Pradesh, Andhra Pradesh and Tamil nadu have been enjoying tremendous growth in institutional delivery between 1992-93 and 2007-08. Except Rajasthan and Madhya Pradesh, all these states provide the evidence of significant rise in caesarean section births. In 2008, the Maternal mortality (MMR) and the infant mortality rate (IMR/9 in these states were likewise highly high (Register General, India, 2011 and office of the Registrar General, India, 2016). (Register General, India, 2011 and office of the Registrar General, India, 2016). So, it can be stated that these states suffer from

lack of health facilities to address surgical obstetric needs which totally explains increased mortality and ill health of mothers and their newborns in these states. The present study sought to find the significant indications and outcome of lower segment caesarean section. The present study sought to find out significant indications and outcome of lower segment caesarean section.

***Keywords*---**cesarean section, mortality, labor, infant mortality rate.

## Introduction

The word caesarean section is derived from the Roman law lex Cesarea, which was introduced in 715 BCE. The law permitted either an abdominal delivery with the hope of obtaining a live infant or a postmortem abdominal delivery for separate burial. It is a surgical operation in which foetuses born after the 28th week are extracted via an incision in the abdominal and uterine walls of the mother. Operation types include traditional CS and lower segment CS. Operational timing can be defined as either Elective or Emergency. The prevalence of CS in the nation is continuously increasing. Increased safety of the operation due to advances in anaesthesia, identification of high-risk foetuses and mothers, repeat CS in previous CS, rising rates of induction of labour and also failure of introduction, decline in operative vaginal and manipulative vaginal delivery, and the use of caesarean section when vaginal delivery is contraindicated are all contributing factors. Absolute indications include central placenta previa, CPD, contracted pelvis, fibroid tumours, advanced cervical cancer, and vaginal blockage. It is quite possible in prior CS. Fetal distress, Dystonia, APH, Malpresentation, systemic illness (Hypertension, Pre/Eclampsia), etc. 10 to 15 percent is the recommended caesarean delivery rate, according to a WHO assessment. However, the caesarean section rate in India is significantly greater than in other countries. The rising caesarean section rate has contributed to a greater financial strain on health care as well as a rise in maternal morbidity. Though The increase in the rate of LSCS has been a worldwide phenomena. The LSCS rate in the United States is 29.1%, in England it is 21.5%, and in Latin American countries it is 40%. There is a 67 percent likelihood of repeat caesarean delivery after a single LSCS. Between 1992-1993 and 2005-2006, the rate of caesarean section births in India grew from 9% to 10%. The caesarean section delivery rate in India is 9.2% according to DLHS-3 data. Between 1992-1993 and 2007-2008, institutional delivery increased significantly in Jammu and Kashmir, Punjab, Haryana, Rajasthan, Orissa, Madhya Pradesh, Andhra Pradesh, and Tamil Nadu. With the exception of Rajasthan and Madhya Pradesh, all of these states exhibit a considerable increase in caesarean section births. In 2008, both the Maternal mortality (MMR) and infant mortality (IMR/9) rates in these states were extremely high (Register General, India, 2011 and office of the Registrar General, India, 2016 ). Therefore, it may be stated that these states lack the health services necessary to address surgical obstetric needs, which fully explains the higher rates of maternal mortality and infant illness in these states. This study sought to identify the most prevalent indications and outcomes of lower segment caesarean section.

**Objectives**

1. To find out the major indications of LSCS in women delivered.
2. To know the outcome of baby delivered through respective LSCS.

**Method**

This is a cross-sectional study of women who gave birth in a tertiary hospital in northern M.P. During the period of October 2017 to November 2017, 160 participants were administered a pretested, predesigned questionnaire. The research was acknowledged in writing by the Obstetrics and Gynecology department head. In addition to the subjects' demographics (name, age, place of residence, level of education, etc.), questions were asked about their current LSCS status (type, indication), the baby's outcome (sex, birth weight, NICU admission), previous obstetric history, personal habits, trimester-by-trimester history, and post-natal period. Microsoft Excel collected, processed, and interpreted the data. The participants were also given the option to withdraw from the study. After discussing the purpose, nature, and methodology of the study, verbal consent was gained from the participants. They were told that full confidentiality would be observed. This research was conducted at a hospital of tertiary care located in central India. The area has a population of around 20,46,506, with males and females comprising 1,090,327 and 941709 inhabitants, respectively. This cross-sectional study was conducted from October to November 2017 on all hospitalised pregnant women as the study population. Ultimately, 160 women participated in accordance with Purposeful sampling. The inclusion criteria included women who delivered using LSCS, consenting to participate, and being in good health. Those who did not provide consent, were gravely unwell, had a normal birth, or had CS were excluded.

**Discussion**

In our study, 55.0% of respondents were between 20 and 24 years old, followed by 35.0% who were between 25 and 29 years old, and 8.0% who were older than 30 years old. In prior research conducted by M.M. Jadhav et al. (1), 46.5% were between 20 and 24 years of age, 26.5% were between 25 and 29 years of age, and 19.1% were beyond 30 years of age. 83.75 percent of respondents identified as Hindu, while 16.25 percent identified as Muslim. In prior research conducted by Prashant Bade et al. (2), 52.73 percent of participants were Hindu and 15.63 percent were Muslim. The discrepancy between our study and the previous one may be due to the Hindu population in the area. 95 percent of respondents were housewives, 2.5 percent were labourers, and the other respondents had various occupations. In previous studies conducted by M.M. Jadhav et al.(1), it was determined that 96.3% of participants were housewives and 3.7% were self-employed. 35 percent of respondents were illiterate, 6.25 percent had completed elementary school, 20 percent had completed middle school, and 8.75 percent were graduate or postgraduate students. Previous research by Rajel Thaker et al.(3) revealed that 34.7% of the population was illiterate, 42.7% had completed elementary school, 21.4% had completed middle school, and 1.8% were college graduates. (Table-1)

Table 1
Demographic characteristics of Participants

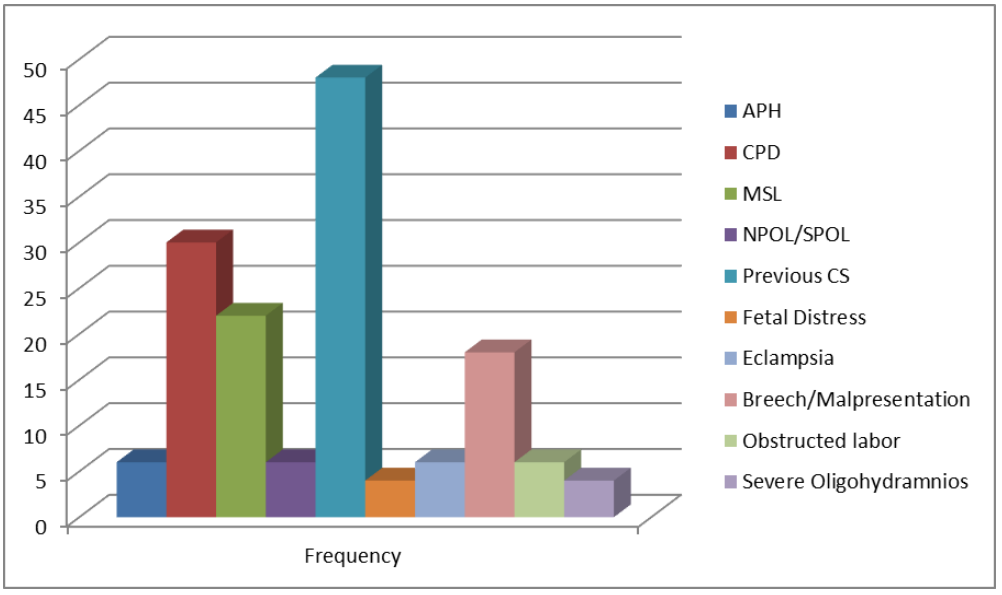
| Particulars | Sub- Particulars | Frequency | Percent (%) |
|---|---|---|---|
| Age group | 15-19 | 4 | 2.5 |
| | 20-24 | 88 | 55 |
| | 25-29 | 56 | 35 |
| | 30-34 | 10 | 6.25 |
| | 35-39 | 2 | 1.25 |
| Religion | Hindu | 134 | 83.75 |
| | Muslim | 26 | 16.25 |
| | Others | 0 | 0 |
| Residence | Urban | 78 | 48.75 |
| | Rural | 82 | 51.25 |
| Occupation | Housewife | 152 | 96 |
| | Labourer | 4 | 2.5 |
| | Others | 4 | 2.5 |
| Education | Illiterate | 56 | 35 |
| | Primary school | 10 | 6.25 |
| | Middle school | 32 | 20 |
| | High school | 22 | 13.75 |
| | Intermediate | 26 | 16.25 |
| | Graduate or above | 14 | 8.75 |
| SES | Upper | 10 | 6.25 |
| | Upper middle | 68 | 42.5 |
| | Lower middle | 46 | 28.75 |
| | Upper lower | 36 | 22.50 |
| | Lower | 0 | 0 |

The majority of CS were undertaken due to previous CS (36.25 percent) and CPD (18.75 percent ). This conclusion is comparable to those of Anand Nikhil et al. (4) and Prashant Bade et al.(2who found 42.06 percent and 17.60 percent, respectively ) and controversed with the statement of S N Mukherjee(5) who state that Carefully supervised vaginal delivery after CS needs to be enthusiastically encouraged by promoting trial of scar or trial of labor, . By age, 2.5% of the individuals in our sample of 160 women undergoing LSCS were between 18 and 19 years old, 55% were between 20 and 24 years old, 35% were between 25 and 29 years old, and 6.2% were between 30 and 34 years old. By residence, 48.75 percent of the population was urban while 51.25 percent was rural. 134 individuals (83.75 percent) identified as Hindu, whereas 26 (16.25 percent) identified as Muslim. By occupation, 152 (95 percent) of the women were housewives, 4 (2.5 percent) were labourers, and 4 (2.5 percent) held other jobs. By education of women, 56 (35%) were illiterate, 10 (6.25%) had elementary education, 32 (20%) had education up to middle school, 22 (13.75%) had education up to high school, 26 (16.75%) had education up to intermediate level, and 14 (8.75%) were graduate or post graduate. 68 (42.5%) were of the upper middle class, 46 (28.75%) were of the lower middle class, 36 (22.5%) were of the upper lower class, 10 (6.25%) were of the top class, and no one was of the bottom class. 78 (48.75%) individuals were referred, while the remaining 82 (51.25%)

reported directly to the institution. According to the LSCS booking status, 144 (90 percent) were unreserved and 16 (ten percent) were reserved. There were 158 (98.75 percent) emergency LSCS and 2 (1.25%) LSCS. 6 (3.75%) of the subjects had APH, 30 (18.75%) had CPD, 22 (13.75%) had MSL, 6 (3.75%) had NPOL, 58 (36.75%) had previous CS, 4 (2.5%) had foetal Distress, 6 (3.75%) had Eclampsia, 18 (11.25%) had Malpresentation, 6 (3.75%) had obstructed labour, and 4 (2.25%) had severe oligohydramnios this finding were supported by study done by Shewli Shabnam. Which state that "Complications during pregnancy are important factors that may raise the chances of planned caesarean delivery"(5).(Table -2, Fig-1)

Table 2
Indication for LSCS

| | Type | Frequency | Percent (%) |
|---|---|---|---|
| Major Indications | APH | 06 | 3.75 |
| | CPD | 30 | 18.75 |
| | MSL | 22 | 13.75 |
| | NPOL/SPOL | 6 | 03.75 |
| | Previous CS | 48 | 36.25 |
| | Fetal Distress | 4 | 02.50 |
| | Eclampsia | 6 | 03.75 |
| | Breech/Malpresentation | 18 | 11.25 |
| | Obstructed labor | 6 | 03.75 |
| | Severe Oligohydramnios | 4 | 02.50 |



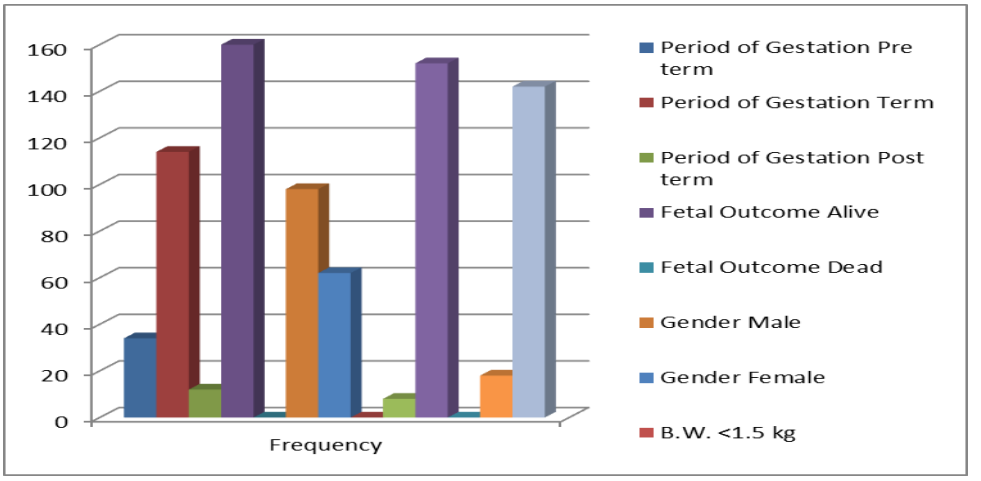

The outcome of the baby at each LSCS was that all 160 (one hundred percent) were alive. 98 (61.25%) were male, while the remaining 62 (38.75%) were female. 114 (71.25%) were full-term infants, 34 (21.25%) were preterm infants, and 12 (7.5%) were post-term infants. 152 babies (95 percent) had normal birth weight,

whereas 8 (five percent) had a birth weight between 1.5 and 2.4 kilogrammes. According to the requirement for NICU admission for the baby, 142 (88.75%) were not admitted, whereas 36 (11.25%) were admitted. According to the type of contraceptive method chosen after LSCS, 82 (51.25%) patients did not choose any method, while 78 (48.75%) opted for contraception; of them, 68 (42.5%) had PPIUCD insertion and 10 (6.25%) had bilateral tubectomy. (Table-3 , Fig -2)

Table 3
Fetal Outcome

| Particulars | Particulars | Frequency | Percent(%) |
|---|---|---|---|
| Period of Gestation | Pre term | 34 | 21.25 |
| | Term | 114 | 71.25 |
| | Post term | 12 | 7.5 |
| Fetal Outcome | Alive | 160 | 100 |
| | Dead | 0 | 0 |
| Gender | Male | 98 | 61.25 |
| | Female | 62 | 38.75 |
| Birth weight | <1.5 kg | 0 | 0 |
| | 1.6-2.4 kg | 8 | 5 |
| | 2.5-3.9 kg | 152 | 95 |
| | >4 kg | 0 | 0 |
| NICU admission | Yes | 18 | 11.25 |
| | No | 142 | 88.75 |

Fig.2




**Conclusion**

The present study which aimed to find out main indications and outcome of lower segment caesarean section on the maternity unit carried out with aims to find out the primary indications of LSCS in women delivered at Hospital and to know the outcome of baby delivered by respective LSCS. Through the study It could be

concluded that, 36.75 percent individuals had Previous CS as a major indication for present LSCS followed by 18.75 percent cases with CPD as next major indication for CS. As far as the outcome is concerned 95 percent kids were if normal birth weight, 71.25 percent were full term babies and only 11.25 percent babies were admitted to NICU.

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