

# An Analysis of Indications for Caesarean Section at Government Medical College, Latur

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## Research Article

**Abstract: Background:** According to WHO, the optimal caesarean delivery rate is 10-15%. However the caesarean rate is much higher in India. The increased caesarean rate has resulted in increased economical burden on health care and possibly increased maternal morbidity. **Objectives:** To study various indications for caesarean sections performed at Govt. Medical College and Hospital, Latur. To suggest recommendations to reduce the caesarean section rate. **Materials and Methods:** This study is a record based cross sectional study, conducted at Government Medical College and Hospital, Latur. All women who underwent caesarean section from March 2013 to August 2013 were included in the study. Data was entered in MS Excel and analyzed with percentages and chi square test using SPSS ver.21. **Results:** Caesarean section rate observed in our study was 23.97%. It was significantly more common in the age group of 21-30 years, women with parity 2 and rural women. The primary LSCS rate was 41.99% and that of repeat LSCS was 58.01%. The Emergency LSCS rate was significantly higher (74.22%) than elective LSCS rate. The commonest indication for LSCS was previous LSCS (24.8%) followed by, cephalopelvic disproportion (17.6%), failure to progress (16.6%), and fetal distress (11.7%). **Conclusions:** In this study, caesarean section rate is higher than WHO standard and previous LSCS was the most common indication. So reduction in overall caesarean section rate can be met through reduction of elective LSCS with the promotion of trial of labour and by improving maternal health. **Interpretation:** Though the benefits of the caesarean section cannot be denied, unnecessary caesarean sections should be avoided.

**Keywords:** caesarean section, primary and repeat caesarean section.

## Introduction

As early as 1960, Munro Kerr wrote: "I fear that today more than ever before, there is a danger of abdominal delivery being regarded as the legitimate method of dealing with each and every obstetrical abnormality"<sup>1</sup>. Caesarean section (CS) is a time honoured approach which was introduced in clinical practice as a life saving procedure both for the mother and the baby. But currently, being described as the "caesarean birth epidemic" may now well be considered a true pandemic emerging issue in mother-child healthcare<sup>2</sup>. A leading editorial stressed that the rise in caesarean section is now a matter that deserves international attention, since the trend is no longer confined to western industrialized

countries<sup>3</sup>. It has been suggested that national caesarean delivery rates do not reflect what is happening locally, supporting the trend toward monitoring rates at the level of individual hospital or physician<sup>4</sup>. WHO endorsed the principle in 1985 that there is no region in the world where a population-based caesarean section rate exceeding 15% of all live-births is justified<sup>5</sup>, which was revised in 1994 with the guidelines and also was published in 1997 by UNICEF, WHO and UNFPA stating that proportion of Caesarean births should range between 5 to 15%. The rate of Caesarean Sections below 5% seems to be associated with gaps in obstetric care leading to poor health outcomes for mothers and child, whereas rates over 15% don't seem to improve either maternal or infant health<sup>6-7</sup>. So we analyzed the situation regarding the indications for caesarean section at our tertiary care institute to find out the commonest indications of CS so as to curtail the increasing caesarean section rate.

## Methods

This study is a Hospital record based cross sectional study, conducted at Govt. Medical college and hospital, Latur (which is a tertiary care institute). The data of all women who underwent caesarean section from March 2013 to August 2013 at this tertiary care institute was collected for the study. LSCS (Lower Segment Caesarean Section) was classified as 'Elective CS' when caesarean section was done as a preplanned procedure during late pregnancy to ensure the best quality of anesthesia, neonatal resuscitation and nursing services. It was labeled as 'Emergency CS' when the operation was performed due to unforeseen or acute obstetric emergencies. LSCS done for the first time on women was labeled as a Primary CS and Caesarean section performed on women with one or more previous caesarean delivery was labeled as 'Repeat CS'<sup>8-10</sup>. Data was entered in MS Excel and analyzed with percentages and chi square test using SPSS ver.21.

**Objective**

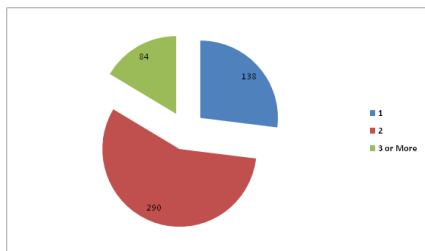
To find out the Caesarean Section rate and analyses their indications at Govt. medical college, Latur to suggest suitable recommendations according to the findings of the present study.

**Results**

There were 2136 deliveries during the period of March 2013 to August 2013. Caesarean section rate observed in our study was 23.97%. Around 72.27% of the total caesarean deliveries were unbooked. It was significantly more common in the age group of 21-30 years age group (71.3%), with 21.87% in the age group of <20 years, and 6.84% in the age group of >30 years. It was significantly more common in the women with parity 2 (56.6%) and women coming from rural area (74.8%) (p<0.001) followed by 25.2% from urban area. The primary LSCS rate was 41.99% and that of repeat LSCS was 58.01%. The Emergency LSCS rate was significantly higher (74.22%) than elective LSCS rate (25.78%) [Table and figure 1-3]. The commonest indication for LSCS was previous LSCS (24.8%) followed by, cephalopelvic disproportion (17.6%), failure to progress (16.6%), and fetal distress (11.7%) [Table I].

**Table 1:** Indications of LSCS

Indication of LSCS	Number of women	Percentage (%)
<b>Maternal</b>		
Previous LSCS	127	24.8
Failure to progress	85	16.6
Threatened rupture	10	2.0
HIV/Genital lesions	6	1.2



**Figure 1:** Distribution Of Caesarean Deliveries as per Parity

APH	11	2.1
Obstructed labor	16	3.1
Cephalopelvic disproportion	90	17.6
Failed induction	15	2.9
<b>Fetal indications</b>		
IUGR	10	2.0
Multiple gestation (twins)	15	2.9
Malpresentations other than breech	20	3.9
cord prolapsed	6	1.2
Fetal distress	60	11.7
Breech	15	2.9
Oligohydramnios	10	2.0
<b>Others</b>	16	3.1
<b>Total</b>	<b>512</b>	<b>100</b>

**Table 2:** Age-Wise Distribution of Caesarean deliveries

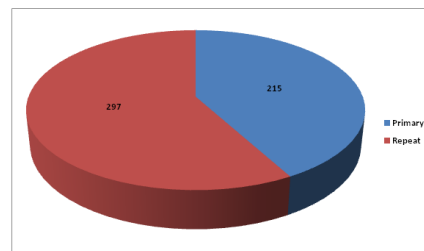
Age Group	No. of Deliveries	Percentage (%)
<20 Years	112	21.87
21-30 Years	365	71.29
>30 Years	35	6.84
Total	512	100

**Table 3:** Residence wise Distribution of Caesarean deliveries

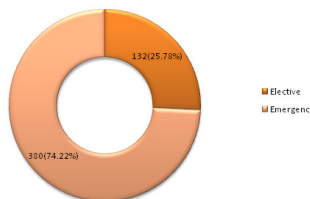
Residence	Number of Deliveries	Percentage (%)
Urban	129	25.2
Rural	383	74.8
Total	512	100

**Table 4:** Religion wise Distribution of Caesarean deliveries

Religion	No. of Deliveries	Percentage
Hindu	270	52.73
Buddhist	162	31.64
Muslim	80	15.63
Total	512	100



**Figure 2:** Distribution according to type



**Figure 3:** Distribution according to the type

**Discussion**

Caesarean section rates found in our study is high (23.97%) and this rising rates of Caesarean Sections have

potential to divert human and financial resources from others, arguably higher priority interventions<sup>11</sup>. Though, the increasing safety of modern anesthesia and improved

blood bank facilities has made cesarean delivery much safer in the present era, it also raises the possibility of negative impact on maternal and neonatal health which has received support from a number of studies<sup>12</sup>. Several factors have been attributed for this rise. Improved fetal surveillance and NICU facilities have expanded the fetal indications for cesarean deliveries. Cesarean section rates have increased also in many other countries. In the USA, cesarean birth rate rose from 5.7% to over 21% during 1970-1984, followed by a levelling of phase at about 24% in the early 1990s, and in Brazil, rates of over 40% have been reported recently<sup>13-15</sup>. The emergency CS rate (74.22%) in our study is higher than Elective CS (25.78%). This is probably because our hospital is a referral hospital and most cases were unbooked (72.27%). The figures provided are hospital-based and do not necessarily reflect what is happening in the community. The people attending this hospital are probably not a representative cross-section of the overall population. Hence, comparison with settings of other countries is difficult. Women undergoing CS are exposed to the risks of anesthesia, hemorrhage, injuries; deep venous thrombosis, sepsis and other postoperative complications<sup>16</sup>. Women undergoing CS have increased risk of placental abnormalities<sup>17</sup>, uterine rupture<sup>18</sup> and ectopic pregnancy<sup>19</sup> during the subsequent pregnancies. Longer bed occupancy and higher health care costs are also of concern to the health care providers. Hence every effort should be made to reduce the unnecessary CS, through various measures including Trial of Labour.

### Conclusions

In this study, cesarean section rate (23.97%) is found to be higher than WHO guidelines (5-15%). Higher Cesarean rate exerts a burden on the healthcare expenditure of the Government. While the benefits of the indicated cesarean delivery cannot be denied, unnecessary cesareans must be avoided. Previous LSCS was the most common indication followed by cephalopelvic disproportion, failure to progress and fetal distress. Since previous LSCS is a common indication, Trial of labor

should be encouraged in properly selected cases of previous LSCS. So reduction in overall cesarean section rate can be met with the promotion of trial of labour.

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