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## Rising Trend of Caesarean Section in Rural India: A Prospective Study

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**Introduction-** The rate of caesarean section is constantly increasing beyond the recommended level of 5-15% by world Health Organization. Caesarean section is usually performed to ensure safety of the mother and child under conditions of obstetric risks. This medical intervention is more or less justified under certain circumstances such as breech presentation, dystocia, previous caesarean section and suspected fetal compromise.

Caesarean section rate varies in different places depending on type of care giver and type of facility. In the last decade, the rate has increased almost double. In developing countries like India too many women are undergoing caesarean section. This trend is rising in urban as well as in rural population of India. In 2010, the incidence was around 8.5% but a phenomenal increase of 40 % was seen in Kerala and Tamil Nadu .It is found that the low threshold for caesarean is becoming common in rural India as well.

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# Rising Trend of Caesarean Section in Rural India: A Prospective Study

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## I. INTRODUCTION

The rate of caesarean section is constantly increasing beyond the recommended level of 5-15% by world Health Organization. Caesarean section is usually performed to ensure safety of the mother and child under conditions of obstetric risks. This medical intervention is more or less justified under certain circumstances such as breech presentation, dystocia, previous caesarean section and suspected fetal compromise.<sup>1</sup>

Caesarean section rate varies in different places depending on type of care giver and type of facility. In the last decade, the rate has increased almost double. In developing countries like India too many women are undergoing caesarean section. This trend is rising in urban as well as in rural population of India. In 2010, the incidence was around 8.5% but a phenomenal increase of 40 % was seen in Kerala and Tamil Nadu .It is found that the low threshold for caesarean is becoming common in rural India as well.<sup>2</sup>

The factors which are responsible for this trend include increased institutional deliveries, inadequate use of electronic foetal monitoring, inadequate care and apprehension of patients as well as doctors. Unnecessary caesarean sections can increase the risk of maternal morbidity, neonatal death and neonatal admission to an intensive care unit and overall cost of health care. Moreover, in any antenatal women with previous caesarean section careful intrapartum monitoring is required to check for integrity of previous scar .This may not be possible for all specially those living in rural and underprivileged sector India. Therefore primary caesarean section should be planned very judiciously after critical evaluation of circumstances.

Our study is planned to introspect this sharp increase in the rate of caesarean section and to find out its determinants.

### a) Aims and objectives

1. To analyse the current trend of caesarean section in rural India. .
2. To determine the factors responsible for caesarean section.

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## II. MATERIAL AND METHOD

This prospective study was carried out in Acharya Vinoba Bhave Hospital, Sawangi, Maharashtra, Department of Obs and Gynae from May 2015 to October 2015. Total 500 patients were consecutively selected. After taking consent, detailed past and present history was taken from all the cases, general and local examination was done on the day of LSCS. CPD (Cephalopelvic disproportion) was assessed mainly by clinical pelvimetry. Labour patients were monitored by plotting partogram. All the investigations Hb%, Blood grouping & Rh typing, urine R/E, obstetric USG was taken into account and in selected cases blood urea, s. creatinine, serum uric acid, SGPT and serum electrolyte done.

Blood/Donor was kept ready in selected cases such as placenta Previa. Detailed analysis of cases was done in terms of emergency/elective, type of LSCS, complications, high risk factors and other contributing factors in pre structured proforma. Stastical analysis was done by test of significance.

### Exclusion criteria

- Previous caesarean section
- Conception after ART
- Estimated foetal weight more than 4 kg

### III. RESULTS

Distribution of cases according to the Age

AGE	NO OF CASES (N=500)	percentage
20years	<u>45</u>	<u>9%</u>
20-25 years	<u>305</u>	<u>61%</u>
26-30years	<u>115</u>	<u>23%</u>
Above 30 years	<u>35</u>	<u>7%</u>
<b><u>EDUCATION</u></b>		
Primary education	282	56.5%
Middle school	164	32.8%
High school	36	7.2%
Graduate	18	3.5%
<b><u>Socio economic status</u></b>		
Class 1	26	5%
Class 2	97	19.5%
Class 3	190	38%
Class 4	157	31.55%
Class 5	30	5.95%
<b><u>occupation</u></b>		
Home maker	205	41%
Manual labourer/Farm worker	223	44.6%
Office worker	72	14.4%

Table no 2) Distribution of cases according to Indications of Iscs

Indications	No of cases N=500	Percentage*
Fetal Distress	<u>139</u>	<u>27.8%</u>
Obstructed Labor	<u>29</u>	<u>5.8%</u>
Failed Progression Of Labor	<u>30</u>	<u>6%</u>
Pre labor rupture of membranes	<u>30</u>	<u>6%</u>
Bad Obstetric History	<u>17</u>	<u>3.4%</u>
Breech Presentation	<u>28</u>	<u>15%</u>
twins	<u>5</u>	<u>1%</u>
CPD	<u>20</u>	<u>4%</u>
Transverse Lie	<u>4</u>	<u>0.8%</u>
Face Presentation	<u>6</u>	<u>1.2%</u>
Brow Presentation	<u>4</u>	<u>0.8%</u>

Eclampsia	<u>8</u>	<u>1.6%</u>
Pre-Eclampsia	<u>39</u>	<u>7.8%</u>
Cord Prolapse	<u>9</u>	<u>1.8%</u>
Hydromnios	<u>23</u>	<u>4.6%</u>
IUGR	<u>25</u>	<u>5%</u>
Placenta Previa	<u>3</u>	<u>0.6%</u>
Abruption placenta	<u>14</u>	<u>2.8%</u>
Medical disorder(GDM)	<u>7</u>	<u>1.4%</u>
Previous surgery	<u>12</u>	<u>2.4%</u>
Mothers request	<u>47</u>	<u>8.7%</u>

\*percentage differs due to multiple indicators

## IV. RESULTS AND DISCUSSION

Caesarean section is used in cases in which vaginal delivery either is not feasible or would impose undue risk on mother or baby. Rising incidence can be explained by the fact that our hospital is a tertiary care centre and receives a good number of high risk emergency cases with inadequate or no antenatal care. Most of the patient brought late in labour after being handled by untrained birth attendants and are actually and potentially infected, often anaemic and dehydrated. Early detection & early decision also increase the incidence of LSCS.

Analysis of age group shows that 84% patients belonged to age group of 20-30years, a study in IPGMR<sup>3</sup> showed 89% among this group and 77% in a study by Karim ET al<sup>4</sup>.

In this study most common indication of cesarean section was fetal distress 27.8% which was similar to the study done by Patil et al<sup>5</sup> in 2011 the rate was 35%. With the availability of early predictors of foetal wellbeing such as NST Machines, Foetal Doppler's, Biophysical profiles & the Foetal scalp blood pH estimations over diagnosis of foetal distress along with increased dependency on the machines may be one factor for increased rate of LSCS.

15% patients had breech presentation which was similar to study done by Karim et al<sup>4</sup> 9.8% and 6% by Nahar et al<sup>6</sup>.

Failed progression of labour was reported in 6% cases which was similar to study of Nahar et al<sup>6</sup> 10%, 14.8% by Karim et al<sup>4</sup>.

6% patients had pre mature rupture of membranes as the indicator 18.5% was seen in study by Karim ET al<sup>4</sup>.

Malpresentation was indicator in 2.8% cases which was similar to study done by Nahar ET al<sup>6</sup> was 6%.

CPD was 4%, whereas in a study by Nahar ET al<sup>6</sup> it was 6%.

Amniotic fluid disorders particularly oligohydramnios were 4.6% culminating to caesarean section in our study whereas in study done by Patil ET al<sup>5</sup> the incidence in 2000 was 8% of total indications of caesarean section.

Eclampsia and pre-eclampsia as a primary indication for caesarean section was 9.4% in study by Patil et al<sup>5</sup> it was 7 % of total indications, in study by Nahar et al<sup>6</sup> was 12% and 6.32% in a study by Karim et al<sup>4</sup>. Rising Obesity, anaemia in rural area amongst the women can be considered one of the factors leading to Hypertension during the pregnancy.

Incidence of abruptio placenta, placenta Previa was 2.8% and 0.6% where as in study done by Patil ET al<sup>5</sup> it was 3-4%.

1.4% cases were reported to have medical disorders (GDM) whereas in study by Karim ET al<sup>4</sup> it was 15.7%.

Patients who were from class 5 of socio economic status or who were graduate and office workers had personal request of getting LSCS done which accounted for 8.7% because it was feasible and less time consuming and did not wanted to undergo so much trauma and did not want to take any risk.

## V. CONCLUSION

In modern obstetrics, Caesarean section is a important surgical procedure for delivery, because of its low rate of maternal morbidity and mortality due to improved surgical technique and modern anaesthetic skill. The scheme like Janani Suraksha Yojana (JSY) may have a great impact on accepting institutional deliveries by poor women. Rising institutional delivery may be a reason of the increase of CS in India. Rising litigation, insurance, preterm caesarean section to salvage the premature babies in the era of modern

NICU facility & doctors anxiety are leading to the era of more operative deliveries.

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