CMRO 03 (06), 475-477 (2020)

ISSN (O) 2589-8779 | (P) 2589-8760



Analysis of Primary Caesarean Section in a

District Hospital

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DOI: https://doi.org/10.15520/jcmro.v3i06.300

Accepted 10-06-2020; Received 25-05-2020; Publish Online 11-06-2020

Reviewed By: Dr. V. Daniel Department: Reviewer/CMRO



ABSTRACT

Background: Caesarean delivery is defined as an operative procedure to deliver the fetus or foetuses after the period of viaility through an incision on the adominal wall and uterine wall in an intact uterus. The World Health Organization (WHO) has identified an ideal caesarean section (CS) rate for a nation of around 10-15%¹. The objective of the present study was to find the rate of primary caesarean deliveries in and its contribution to total caesarean rate and to analyze the indications of the caesarean sections.

Methods: It is a retrospective observational study conducted in the Department of Obstetrics and Gynaecology at Regional hospital, Bilaspur. A total of 90 primary caesarean deliveries were studied.

Results: The total deliveries during the study period were 809 and the total caesarean section rate observed was 14.96%. The caesarean section rate among primigravidae was 74.38%. Out of the total number of primicaesarean deliveries, 92.22% were performed in emergency and 7.78% were performed electively. Among the emergency caesarean sections performed, 60.24% of patients had induced labor and 39.76% had spontaneous labor. The most common indication of caesarean section was fetal distress (43.33%) followed by failed induction(18.89%) and malpresentations (16.67%).

Conclusions: Caesarean audit should be performed routinely and every case should be scrutinised. Reducing the primary caesarean rate not only decreases total caesarean rate but also many long-term complications associated with previous caesarean sections like adherent placenta ,rupture uterus etc.

Key words: Caesarean section–Fetal distress–Indications–Labor–Malpresentations

1 INTRODUCTION:

Caesarean delivery is defined as an operative procedure to deliver the fetus or foetuses after the period of viaility through an incision on the adominal wall and uterine wall in an intact uterus. The World Health Organization (WHO) has identified an ideal caesarean section (CS) rate for a nation of around 10-15% [1].

The common indications of primary caesarean section are contracted pelvis, cephalopelvic disproportion, failure to progress, non-reassuring fetal heart rate pattern, malpresentations

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like transverse lie, breech, malpositions like mentoposterior position, Brow presentation, face presentation, placenta previa, abruptio placenta with live fetus, maternal conditions like cardiac diseases such as Eisenmenger syndrome, severe aortic stenosis, marfans syndrome with dilated aortic root, uncorrected coarctation of aorta, history of recent myocardial infarction, cor pulmonale, cord prolapse, multiple gestation. [2]

The objective of the present study was to find the rate of primary caesarean deliveries in and its contribution to total caesarean rate and to analyze the indications of the caesarean sections.

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2 METHODS:

It is a retrospective study conducted in Department of Obstetrics and Gynecology,Regional Bilaspur ,HP, India from 1^{st} October 2019 to 31^{st} March 2020. The data was collected from the hospital records.

The total number of deliveries (both vaginal route and caesarean section) along with the total number of caesarean sections during the study period were noted to calculate the total caesarean section rate in the hospital. All primary caesarean sections performed were analyzed in detail.

The total caesarean rate = (total number of caesarean

sections in the study period/ total deliveries) x100 $\,$

Primary Caesarean rate = (Primary caesarean sections /total caesareans) x100

3 RESULTS:

 Table 1. Caesarean sectionrates

Mode of Delivery	Number of cases	Percentage
Vaginal Delivery	688	85.04%
Caesarean Delivery	121	14.96%
Total	809	
Primary/Repeat CS		
Primary Caesarean	90	74.38%
Repeat Caesarean	31	25.62%

Table 1 shows that the total caesarean rate in our institution in the study period was 14.96 %. Out of the total caesareans primary caesareans contributed around 74.38%

Table 2. Emergency versuselective primi caesareans (N=90)

Caesarean section	Number of cases	Percentage
Emergency Caesarean	83	92.22%
Elective caesarean	7	7.78%
Total	90	100%

It was observed that out of total 90 caesarean sections performed, 83 (92.22%) were performed on emergency basis due to various indications like fetal distress, arrest of labor, cephalopelvic disproportion in labor etc and 7 (7.78%) were done on elective basis Table 2.

Table 3. Percentage of Primary Caesarean Section in relationtoPeriod of Gestation(N=90)

Period of Gestation	Number of cases	Percentage
< 37 weeks	11	12.22%
=>37 weeks	79	87.78%
Total	90	100%

Out of the total 90 emergency caesareans, 12.22% were preterm caesarean while 87.78% were term caesarean sections Table 3.

Table 4 shows that out of all the emergency primi caes areans , 39.76% cases had spontaneous labour while majority of them (60.24%) had induced labour .

 Table 4. Emergency caesareansections-spontaneous labor versus induced labor (N=83)

Nature of labour onset	Number of cases	Percentage
Spontaneous labour	33	39.76%
Induced labour	50	60.24%
Total	83	100%

Table 5. Indications of PRIMIcaesarean sections (N=90)

Indications	Number of	Percent-
	cases	age
Fetal distress	39	43.33%
Failed induction	17	18.89%
Malpresentation	15	16.67%
Failed Progression	10	11.11%
Cephalopelvic	4	4.44%
Disproportion		
Placenta previa/APH	2	2.24%
DTA	1	1.11%
Medical Disorders	1	1.11%
Vaginal Varicose veins	1	1.11%
Total	90	100%

The indications of primary caesarean section (total 90 patients) are described in Table 5. It was seen that most common indication of primary caesarean was fetal distress-43.33%%, followed by failed induction -18.89%. The list was followed by other indications in decressing trend- malpresentations (16.67%), failed progression(11.11%), CPD (4.44%), Placenta previa/APH (2.24%), DTA (1.11%), Medical disorders (1.11%) and vaginal varicose veins (1.11%).

4 **DISCUSSION:**

In the current analysis the rate of primary caes arean section was observed as 74.38%.

Out of the total number of primi caesarean deliveries, 92.22% were performed in emergency and 7.78% were performed electively. Our hospital being referal center, also attends to the obstetric emergencies from nearby health centres which adds to the emergency caesarean section census.

Among the emergency caesarean sections performed, 60.24% of patients had induction of labor and 39.76% were in spontaneous labor. Around 7.78% of patients were operated before going into labor. Appropriate case selection for induction of labor taking into account the bishop score and urgency of the indication, will help in reducing unnecessary induction failures. In a study conducted in a tertiary hospital in Karnataka, India (2017) the induction of labor group was associated with increase in caesarean section rates of up to 31% when compared to that of spontaneous group which is 12%. This is statistically significant with a p value of<0.001 [3].

Among the indications in our study ,fetal distress(43.33%) was the most common indication which was lower as compared to the studies conducted by Singh G etal [4] (25.40%) and Chavda D etal [5] (0.90%). The second most common indication in our institution was failed induction (18.89%) which is comparable to Sarma P etal [6] (14%) and higher than that of Chavda D etal⁵ (7.30%), Bade P etal [7] (2.90%) and Balel O etal [8] (3.11%).third most common indication of primi caesarean in our study was malpresentation (16.67%) which is similar to Chavda D etal ⁵(18.60%).

5 CONCLUSION:

Out of total caesarean deliveries , 74.38% caesareans were primary caesarean deliveries. 92.22% of the caesarean deliveries were conducted in emergency . Majority of the caesarean sections done were at gestation >37 weeks and mostly were on patients after labour induction (60.24%). The three most common indications of caesarean were fetal distress (43.33%) ,failed induction (18.89%) and fetal malpresentations (16.67%).

Caesarean audit should be performed routinely and every case should be scrutinised. Reducing the primary caesarean rate not only decreases total caesarean rate but also many long-term complications associated with previous caesarean sections like adherent placenta ,rupture uterus etc.

Acknowledgement: Authors are thankful to the hospital authorities, the record section and Department of Obstetrics and Gynaecology for allowing the authors to collect the hospital data for preparing this article.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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