



## CAESAREAN SECTION; ITS FREQUENCY AND INDICATIONS IN DHQ TEACHING HOSPITAL, SAHIWAL.

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**ABSTRACT... Introduction:** Caesarean Section (CS) is a surgical procedure carried out for the delivery of the baby when circumstances render the possibility of a safe vaginal birth. Though caesarean section can be life-saving in many situations, its unnecessary use has become a global health concern. For almost 3 decades, the ideal rate for caesarean sections was considered to be between 10% and 15% but its consistently increasing frequency over the past years has brought it to limelight. **Objective:** To determine the frequency and indications of Caesarean section at DHQ Teaching Hospital, Sahiwal. **Study Design:** A Cross-sectional descriptive study. **Setting:** Department of Gynaecology and Obstetrics, DHQ Teaching Hospital, Sahiwal affiliated with Sahiwal Medical College, Sahiwal. **Period:** It was carried out over a period of 6 months from December, 2016 to May, 2017. **Methods:** All the caesarean sections carried out during the study duration were included. Both maternal and fetal indications were recorded. The patients not willing to participate were not included. **Results:** Out of the total, Caesarean Section accounted for 44.7% of the total deliveries. 72.05 % were elective and 27.49% were emergency procedures. Most Common Indications were found out to be previous >2 C-Sections (36.4%), previous 1 C-Section (28.3%). Rest of them were breech presentation (2.69%), obstructed labor (1.68%), fetal distress (2.6%), placenta previa (8.08%), APH (2.02%), post-dated pregnancy (4.04%), uterine rupture (7.56%) and others (6.58%). **Conclusion:** It was concluded that >2 previous C-Sections is the most common indication. The high frequency should be controlled by proper counselling and education of the mothers and families, regarding the complications of caesarean section.

**Key words:** Caesarean Section, Indications, Frequency.

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### INTRODUCTION

Caesarean Section (CS) is a surgical procedure performed to save the life of the mother and baby when circumstances render the possibility of a safe vaginal delivery. C-Section has now become the most widely performed surgery in modern obstetrics.<sup>1</sup>

C-Section has come to limelight owing to its excessive consistently increasing rate all over the globe. Despite the fact that it can be life-saving in many situations, its unnecessary use is becoming a matter of concern.<sup>2</sup> For almost 3 decades, the ideal rate for caesarean sections was considered to be between 10% and 15% by the international healthcare community, based on the following statement by a panel of reproductive health experts at a meeting organized by the World

Health Organization (WHO) in 1985 in Fortaleza, Brazil: "[T] here is no justification for any region to have a rate higher than 10-15 %".<sup>3</sup>

C-Section carries a significant risk of morbidity and mortality and should only be performed in there are specific and clearly defined indications.<sup>4</sup>

During these years of relentless increase in its frequency, the indications of Caesarean Section have more or less stayed the same, namely previous C-sections, fetal distress, breech presentations, obstructed labour, failure of induction, improvement of surgical and anesthetic techniques, increased access to tertiary care hospitals, etc.

Political instability, terrorism and poverty has

been destabilizing the nation for quite some time, and Pakistan has made substantial efforts in improving maternal and child healthcare during the previous decade.<sup>5</sup> The frequency has increased in developed and developing countries alike, including Pakistan, despite the efforts.<sup>6</sup>

## OBJECTIVE

To determine the frequency and the probable factors that lead to Caesarean section in DHQ Teaching Hospital, Sahiwal.

## MATERIALS AND METHODOLOGY

### Study Design

A cross-sectional descriptive study.

### Setting

It was carried out at the Department of Gynaecology and Obstetrics, DHQ Teaching Hospital, Sahiwal, a city of southern Punjab centered at a location of about 170 km from Lahore and 180 km from Multan. It drains major public from North and South Punjab and has big catchment area from tehsils and districts located in its vicinity. The aim was to determine the frequency and probable factors of Caesarean Section in the aforementioned Hospital of the city.

The Study was spanned over a period of 6 months from December, 2017 to May, 2017.

### Inclusion Criteria

All the patients booked in the antenatal clinic and cases admitted through emergency for which Caesarean Section was indicated, were included. Both elective and emergency Caesarean Sections performed during the study duration were included. Both maternal and fetal indications for Caesarean section were recorded.

### Exclusion Criteria

Patients not willing to be part of the study were excluded.

### Data Collection

Informed verbal consent was taken from those included and the data was collected with the help of preformed, pre-tested questionnaire and was analyzed manually. The questionnaire

comprised of two parts, A and B. Part A consisted of demographic variables including name, age, marital status, occupation, socioeconomic status and address. Part B consisted of study variables which included gestational age, type, gravidity, parity, previous number of C-sections and outcome of previous pregnancies. Detailed Obstetrical history was abstracted from the patients and jotted down, with special importance to the antepartum, intrapartum and postpartum complications, if any, in previous pregnancy. The cases and their indications, and the decisions undertaken for Caesarean Sections were discussed with the Senior Consultants of the Department throughout the time.

Vital signs, baseline Investigations (complete blood count, blood sugar levels, hepatitis B and hepatitis C antigens, blood grouping, renal function tests, urine analysis, Coagulation profile, ultrasonography) and specific investigations for any medical disorder, were carried out and recorded.

Further information was gathered from records of the Caesarean Sections in theater, labour ward, neonatal ward, patients' case notes and detailed surgical notes. This was then assembled and compiled.

## RESULTS

A total of 664 deliveries were conducted during the study duration. Out of these 664 deliveries, 367 (55.27%) were normal deliveries and 297 (44.7%) were delivered by Caesarean Section. Of the mothers delivered by Caesarean Section, 19.86% were between 15-25 years of age, 78.45% belonged to 23-35 years age group, and 1.68% were part 35-45 years age group.

About 6.7% cases had < Rs.5000 income. 54.45% had income in the range of Rs.5000-10000. 13.88% have income between Rs.11000 to 15,000 and 24.9% cases had income >Rs.15000.

Out of the total C-Sections, full-term, post-term and pre-term pregnancies were 67.3%, 17.84% and 14.8% respectively. 14.8% were primigravida, 82.49% cases were multigravida and 2.69% cases

were grand multigravida. 27.94% were operated on emergency basis and 72.05% were elective cases.

Most Common Indication was previous >2 C-Sections which was 36.4%. Second most common indication was previous 1 C-Section which constituted 28.3% of the total indications. Cases of breech presentation were 2.69%, obstructed labor were 1.68%, fetal distress 2.6%, placenta previa 8.08%, APH 2.02%, post-dated pregnancy 4.04%, uterine rupture 7.56% and other indications comprised of 6.58% of the total C-Sections performed.

	Cases	Percentage (%)
<b>Mode of Delivery</b>		
Normal Deliveries	367	55.27
Caesarean Section	297	44.7
<b>Age</b>		
15-25 years	59	19.86
25-35 years	233	78.45
35-45 years	5	1.68
<b>Income in Rupees</b>		
<5000	20	6.7
5000-10000	162	54.54
11000-15000	41	13.88
>15000	74	24.9
<b>Gestational Age</b>		
Pre-term	98	14.8
Full-term	446	67.3
Post-term	118	17.8

**Table-I. Frequency of different variables in the study**

	Cases	Percentage (%)
<b>Parity</b>		
Primigravida	44	14.8
Multigravida	245	82.49
Grand Multigravida	8	2.69
<b>Type</b>		
Elective	478	72.05
Emergency	185	27.94
<b>Indications</b>		
Previous 1 C-Section	84	28.3
Previous >2 C-Section	108	36.4
Breech Delivery	8	2.69
Obstructed Labour	5	1.68
Post-dated Pregnancy	12	4.04
Fetal Distress	8	2.6
APH	6	2.02
Placenta Prevail	24	8.08
Uterine rupture	50	7.56
Other Indications	43	6.58

**Table-II. Frequency of different indications for cesarean sections in the study**

## DISCUSSION

Cesarean section is exceeding the tolerable limit specified by WHO.<sup>7</sup> Maternal, Neonatal and Infant mortality is found to decrease if the caesarean section rates are up to 10-15%.<sup>8</sup> An increased Caesarean Section rate above this limit does not result in in reduced mortality.

In our study, the frequency of C-Sections accounted for 44.7% of the total deliveries, with elective and emergency cases 72.05% and 27.94% respectively. This is in contrast to a study carried out at Sir Ganga Ram Hospital Lahore 2013 where Caesarean sections accounted for 36.0% of the total deliveries, of which majority of the cases were emergency caesarean sections (29.0%).<sup>9</sup> A similar study carried out at Lady Reading Hospital, Peshawar showed an overall Caesarean rate of 21.7%.<sup>10</sup> However, demographic and health survey conducted in Pakistan found a rising trend of Caesarean Section during 2012–13, showing the rate to be about 25%.<sup>11</sup> The CS rates around the world showed South America having 42.9%, North America (32.3%), Oceania (31.1%), Europe (25%), and Asia 19.2% of the total deliveries.<sup>12</sup>

The improving access to maternal healthcare and increased fetal and maternal monitoring facilities is one of the reasons of our increasing rate. Another reason for the rising trend in our part of the country might be because of referral indications. At DHQ teaching Hospital Sahiwal, we receive unbooked high-risk obstetrical cases which mostly require Caesarean Section.

Mode of delivery of first pregnancy is a major factor in determining the mode of delivery in successive pregnancies. Our study showed C-sections due up to previous 1 C-section and previous 2 or > 2 C-section were 28.3% and 36.4% respectively, making previous Caesarean Section the most common cause. A research carried out in Sir Ganga Ram Hospital Lahore also had similar findings.<sup>13</sup> Another study conducted at Department of Obstetrics and Gynaecology B.S. Medical College & Hospital, Bankura, India also had previous CS the most common factor of increasing rate.<sup>14</sup> However, CPD (25.3%) was

the leading indication for cesarean section in the survey in a General Hospital in West Tigray, Ethiopia by Solomon Gebre.<sup>15</sup>

Trial of VBAC is not always possible owing to risk of rupture of uterus and associated risk to both the mother and baby.<sup>16</sup> The cases received in our hospital with abnormal lie & presentation, those having scar tenderness on examination and previous 2 or >2 C-Sections were not given trial of VBAC, making previous CS the most likely factor in determining the outcome of next pregnancies.

The incidence of Caesarean Section due to uterine rupture in our study was 7.56% of the cases. This was far lower than the rate observed in a study by Mahija Sahu, Natasha H. K in India, 2016 where uterine rupture due to previous history of caesarean section were 30 cases (57.69 %).<sup>17</sup> The cases in our setup were due to mishandling by traditional birth attendants as confirmed by a research by Gondal A, Bokhari S stating that most of the emergency unbooked cases are from rural areas where obstetrician and specialized care is not available, resulting in the transport of these patients at the eleventh hour to tertiary healthcare with complications from trial of labour or mishandling by dai.<sup>18</sup>

Majority of the mothers delivering by Caesarean Section 78.45% belonged to 23-35 years (78.45%). This was different to the results obtained in a study in a Teaching Hospital in India where majority of the cases were among <25 years (54.2%).<sup>19</sup> This might be because of young age marriage in India.

Other common indications were breech presentation (2.69%), obstructed labor (1.68%), fetal distress (2.6%), placenta previa (8.08%), APH (2.02%) and post-dated pregnancy (4.04%).

The rate of CS was high among multigravida patients, similar to finding of Dasari Gayathry.<sup>19</sup>

So these various risk factors should be dealt individually to produce a remarkable decrease in the high CS frequency.

## CONCLUSION

It is concluded from our study that most common indication for C-section in our setup is previous > 2 C-section while the second most common indication was previous 1 C-section. The increasing trend of performing C-Sections is becoming a health problem. Proper counselling should be given to labouring women regarding antenatal education and pros and cons of Caesarian Section for the goodwill of the Community. The increase in Caesarean Section rate is a global health phenomenon and need to be dealt with utmost attention. Prompt measures including Maternal and fetal well-being monitoring may lower the fetal and maternal factors and decrease the overall CS rate.

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*In war, you can only be killed once,  
but in politics, many times.*

– Winston Churchill –



#### AUTHORSHIP AND CONTRIBUTION DECLARATION

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4	Fareeha Yousaf	Data collection	