



## Prevalence And Outcomes of Elective C-Section in A Tertiary Care Hospital

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### Abstract

**Background:** Cesarean-section (CS) delivery (Cd) and vaginal delivery (VD), both are related with notable measurable short-and long-term maternal and neonatal difficulties and advantages. Though normal delivery is expected but some conditions may provoke C-section. The present cross sectional study was conducted on a preliminary basis to evaluate the prevalence of CS delivery in a tertiary care hospital. It also studies the outcome of elective C-section. **Material & Methods:** This cross sectional study was conducted in the Department of Obstetrics and Gynaecology in Bangabandhu Sheikh Mujib Medical College, Bangladesh. The study duration was 6 months, from January 2010 to July 2010. A total of 100 patients undergone elective C-section were selected for this study. Ethical clearance was taken from the medical authority as well as written consent for this research was taken from the patients and guardians. **Results:** 42 people of the study patients were of 25-29 years old and majority of them were housewife (73%). Singleton (88%) cases were major followed by 79% of patients who had the delivery after 37 weeks. Mainly headache (31%) and UTI (31%) were the common complications after the delivery. Prematurity was common complication among the neonates after CD (21%). **Conclusion:** The present study acknowledged that C-section delivery system ensures fetomaternal safety. In some cases, C-section is the only solution to save the life of the mother and the neonate. However, the study also highlighted some probable indications that might engender caesarian delivery.

**Keywords:-** Cesarean-section, normal delivery, preterm, UTI, foetal lie, foetal complications.



## INTRODUCTION

The cesarean-segment (CS) was presented in clinical practice as a lifesaving methodology both for the mother and the infant<sup>1</sup>. The extent of CS to the complete births is thought of as one of the significant marks of crisis obstetric care.<sup>[1,2]</sup> The pace of cesarean delivery (CD) has expanded emphatically over the course of the last 10 years. The perception was that on account of perinatal mortality, there was no advantage of CS for the nations with a high perinatal death rate (>20/1000).<sup>[3]</sup> About 18.5 million CS are performed yearly overall and keeps on ascending in the created as well as in many creating nations.<sup>[4]</sup> The rates in numerous nations have expanded past the WHO suggested degree of 5%-15%. In big league salary as well as low-pay nations the rates have gone up exceptionally in the last not many decades.<sup>[5]</sup> In India the typical rate was expanded from 21.8% to 25.4% with two states, Kerala and Goa, have shown the most elevated level of CS delivery.<sup>[6]</sup> The pace of CD is somewhat a lot higher in confidential medical clinics as opposed to in general wellbeing facilities.<sup>[7]</sup> There was an absence of adequate proof to assess completely the gamble and advantages of arranged CD. Nonetheless, various studies have observed that cesarean cases at maternal request are really rare and numerous individual and cultural reasons including dread of work torment, future sexual disappointment, and so forth, are behind some reasons.<sup>[8]</sup> Surgical intervention during pregnancy is normally performed to guarantee the safety of the mother and the child under states of obstetric risks yet becomes malpractice.<sup>[9]</sup>

The United States has one of the highest rates of maternal mortality among developed nations at 24.7% and high rates of C-section deliveries at 31.6%.<sup>[10,11,12]</sup> The World Health Organization found that a country-level C-section rate of greater than 10% was not associated with reductions in maternal and newborn mortality rates and the American College of Obstetricians and Gynecologists expressed concern for the potential that C-sections were being overused after observing the rapid increase of C-sections between 1996 and 2011 without clear evidence of concomitant decreases in maternal morbidity or mortality rates.<sup>[13,14,15]</sup> Some suggest financial incentives and the resource and scheduling convenience associated with C-section procedures may play a role.<sup>[16,17,18,19,20,21]</sup>

This cross-sectional observational study considered preterm birth, multiple birth, and stillbirth diagnoses as risk factors along with patient specific characteristics (at time of birth) including age, marital status, and race/ethnicity to find the prevalence of caesarian section and its outcome.

### Objective of the study

- General objective: The current study aims to find the reasons behind the different child delivery system other than normal delivery.
- Specific objective: The purpose of this research is to identify the prevalence of C-section in child birth and its outcome in a tertiary care hospital.

## MATERIAL AND METHODS

It is cross sectional study that has been designed to identify the prevalence of C-section in child birth and its outcome in a tertiary care hospital. This study was conducted in the Department of

Obstetrics and Gynaecology in Bangabandhu Sheikh Mujib Medical College, Bangladesh during January 2010 to July 2010. In this 6 months period, 100 patients of different age group got admitted in this hospital with the intention of caesarian delivery.

**Inclusive criteria:** Patients with gross cephalopelvic disproportion, prior two caesarian section, repaired vesico-vaginal fistula, placenta praevia type II, III & IV, intrauterine growth retardation, cervical stenosis, vaginal stenosis, gestational diabetes mellitus and bad obstetric history were included in this study.

**Exclusion criteria:** Any pregnant women admitted for emergency C-section delivery and patients who were unable to give informed medical consent were also excluded.

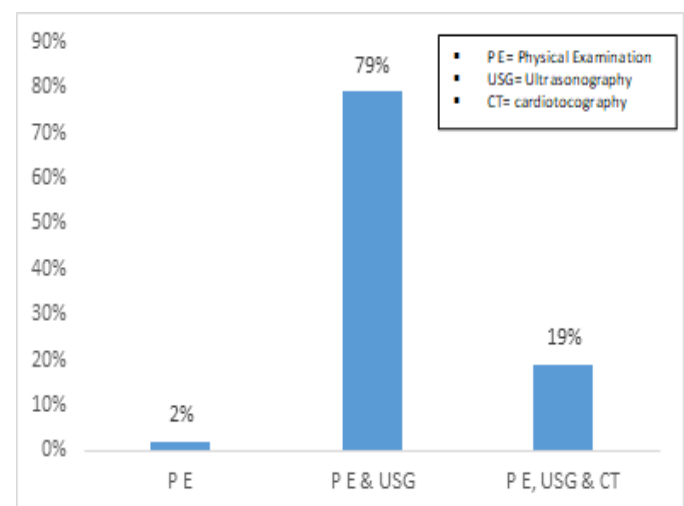
The study commenced in January 2010 to July 2010 and in this period in-hospital data were collected for all patients.

Total 100 patients were selected for this study. Data was collected through interviews and clinical assessment of patients with a present data collection sheet. All the data was checked and edited by using operating system, Windows 10, SPSS-15 (SPSS Inc, Chicago, IL, USA). Ethical clearance was taken from the Bangabandhu Sheikh Mujib Medical College, Bangladesh ethics committees as required. Signed informed consent was obtained from patients or in inability, from their guardians.

## RESULTS

[Table 1] shows the demographic characteristics of the patients. Majority of the patients were of

25 to 29 years old. Most of them were housewife (73%), some of them were students (4%). 87% of the respondents were Muslims. 88% of the study patients were with Singleton pregnancy and only 12% were of multiple pregnancy. Mainly 79 patients had 37 weeks term. Out of 100 patients, 58 of the patients had multiple live births [Table 2]. For elective C-section, 79% of the patients went through physical examination and untrasonography. Two persons had only physical examination and 19% faced physical examination, ultrasonography and cardiocography [Figure 1]. [Table 3] shows 73% of the patients had anaemia. Majority of them had adequately liquid. The foetal presentation was cephalic for 86%. Fatal lie was longitudinal for 92%. After the surgery 31% of the patients had UTI complication and 31% of the total patients experienced headaches [Table 4]. After C-section, 61% of the foetal had no complications, 14% had neonatal jaundice and 21% had prematurity.



**Figure 1:** Distribution of patients according to the method of diagnosis

**Table 1:** Demographic characteristics of the study patients

	Characteristics	Frequency	Percent
Age	≤20	4	4%
	21-24	33	33%
	25-29	42	42%
	30≤	21	21%
Occupation	Housewife	73	73%
	Service	23	23%
	students	4	4%
Religion	Islam	87	87%
	Hindu	10	10%
	Buddhist	2	2%
	Christian	1	1%

**Table 2:** Distribution of the respondents (n=100)

	Types	Frequency	Percent
Pregnancy	Singleton	88	88%
	Multiple	12	12%
Term	Preterm (< 37 weeks)	21	21%
	Term (>37 weeks)	79	79%
Para	Primi	42	42%
	Multi	58	58%

**Table 3:** Distribution of patients according to foetal and patient's condition

	Conditions	Frequency	Percent
Anaemia in patients	Present	73	73%
	Absents	27	27%
Amount of liquor	Adequate	79	79%
	Inadequate	21	21%
Foetal presentation	Cephalic	86	86%
	Breech	14	14%
Foetal lie	Longitudinal	92	92%
	Oblique	5	5%
	Transvers	3	3%

**Table 4:** Complication after C-section

	Complications	Frequency	Percent
Maternal complications	Hemorrhage	13	13%
	Wound infection	6	6%
	UTI	31	31%
	Puerperal pyrexia	13	13%



Foetal complications	Headache	31	31%
	Wound gap	6	6%
	Neonatal jaundice	14	14%
	Prematurity	21	21%
	Birth asphyxia	3	3%
	Congenital anomaly	1	1%
	No complications	61	61%

## DISCUSSION

According to the present research, pregnant women of mid-twenties and early thirties mainly came for elective C-section. Noticeable point was 79 of the total patients had anaemia. Still, 61% of the neonates had no complications after surgery. Minor wound gap and infection was found in some patients. Most of the patients faced UTI (31%) and headache (31%).

CS possibility as several studies suggest that women were more prone to complications as the age of pregnancy and delivery increases.<sup>[22,23]</sup> This study suggested that the risk of CD increased consistently and significantly with increased BMI but optimized BMI favors the VD because higher BMI increases the rate of cephalopelvic disproportion/Failure to progress which favors CS. It is often argued that the power of decision-making in the home and seeking medicalized health care were associated with higher maternal education and family incomes. The study suggests that the proportion of CS is much higher among mothers having secondary and higher education than without education or primary education. In India, the proportion of CD is very high among mothers with high educational background, which perhaps illustrates that women with higher educational attainment can make decisions about their own health care. Researchers have found a strong

correlation between increasing CS deliveries with socioeconomic and cultural factors. In some instances, doctors' preferences for the surgical procedure and women's demands are responsible for the increasing trend of CS which imposed a financial burden on the patients. This study supports the fact that as the majority of CS cases belong to the upper socioeconomic class. Besides, this different rates of CS in public and private hospitals suggested that non-medical factors such as economic gain and pressures of private practice may motivate doctors to perform surgical deliveries. Another factor related to decision-making for CS is giving birth in auspicious time or on some special day. In a country like India, where religion and religious believes takes place before any other things, childbirth in an auspicious day perhaps an important factor for opting surgical intervention.<sup>[24]</sup>

The higher order births are less likely to deliver by CS, this fact is supported by our study but only after third parity as delivery complications are significantly lower among higher-order pregnancies. However, this study on the other hand also showed that up to 3<sup>rd</sup> parity probability of CS was more likely to occur. The factor that provoked for the performance of CS is large size of the baby at birth and the possibility of CS was increased with increasing baby weight. Larger size babies are at higher

risk of being delivered by CS high risk. In India, CS is widely perceived as safer than vaginal birth for babies.<sup>[25,26]</sup> The perinatal mortality, neonatal mortality, or serious neonatal mortality was significantly lower for the planned CS group than for the planned vaginal birth group. The history of infertility treatment among women > 40 years old with singleton pregnancies increases the risk for CD independently of other known risk factors. Although hormonal therapy improves pre- and post-maternal complications, it might instigate CS occurrence. This study reveals that the population taking Hormonal therapy has more probability to undergo CS. Cephalopelvic disproportion is a major risk factor for maternal and perinatal morbidity and mortality.<sup>[24]</sup>

A study's logistic regression models found that patients with a preterm birth diagnosis, younger than 25 years, and identifying as Black/African American or Other/Mixed, were at an increased risk of an emergency delivery. A more serious risk among patients with a preterm birth diagnosis is normal, as general wellbeing endeavors to prevent preterm birth have proposed as a mediation the disposal of early elective deliveries.<sup>[27]</sup> For related reasons, multiple birth and stillbirth diagnoses were also included in the analysis though neither were found to increase risk of emergency C-sections. A more serious risk at a more youthful age might be expected to some degree to an absence of knowledge of the birth process and anxiety fully expecting birth.<sup>[28]</sup> This may cause them to choose to be admitted through the emergency department when entering labor and have an elective delivery such as C-section that is ultimately captured as an emergency admission. This theory is supported by the

decreased risk for patients with more deliveries or repeat C-sections among all deliveries and C-sections. This was unexpected as repeat C-sections have been associated with other adverse effects,<sup>[29]</sup> suggesting other risk factors are more strongly correlated with emergency deliveries. The wellbeing aberrations obvious in the aftereffects of a study line up with designs recognized in pregnancy care and all the more extensively all through healthcare.<sup>[30,31,32,33]</sup> Patients who have encountered more births (multiparous) may have a lower chance of a crisis conveyance since they are more educated about what's in store and maybe more certain about upholding for them or potentially finding support as far as they can tell. Patients with additional births may likewise have had earlier sure encounters at Penn Medication or potentially experience less illness by and large and have the option to support more pregnancies accordingly. Comparative with all conveyances joined, patients with C-sections were on normal more established paying little heed to affirmation type, and there was a more clear differentiation among elective and emergency deliveries.<sup>[34,35,36]</sup>

### Limitations of the study

This study fails to illustrate the overall scenario of Bangladesh as this was a single centered study. To find actual condition of the country, multicenter with large number of sample is suggested.

### CONCLUSIONS

The research indicates that elective C-section, under some certain conditions, may sometimes ease the risk and difficulties of child delivery. Further study in broaden area is required to find

more accurate outcome of elective caesarian section.

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