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Post-partum complications within one week after cesarean section: A study of 100 cases in a tertiary Hospital

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Abstract

Background: Delays in seeking, accessing, and receiving quality care in facilities increase Caesarean delivery rates and risks of adverse outcomes. Other co-morbidities worsen low socioeconomic conditions and nutritional status. Good maternal and perinatal outcomes can be ensured through essential obstetric and newborn care provided by skilled attendants during pregnancy and childbirth.

Aim of the study: To identify the early post-partum complications after the cesarean section.

Methods: Admitted patients were selected with convenience sampling, a non-probability sampling technique for elective and emergency cesarean sections. The primary endpoint was risk factors and elective and emergency cesarean section indications in primi and multigravida. The secondary endpoint includes determining the maternal and fetal outcome of elective and emergency cesarean section in primi and multigravida.

Main outcome measure (s): Age, socioeconomic status, antenatal care, gestational age, weight, blood pressure, complication, an indication of cesarean section, sex, APGAR score, and birth weight.

Result: Most patients in the third decade in both groups and women of low-income socioeconomic status were 71.9% in primi and 65.1% in multi-group. The mean gestational age was 37.6±3.4 weeks in the primi group and 38.1±2.8 weeks in the multi-group. Most women were on irregular antenatal care, 52.6% in the prime group and 53.5% in the multi-group. Meanwhile, 17.5% and 14.0% in prime and multi-group did not receive antenatal check-ups during their pregnancy periods. The mean weight was 52.8±5.4 kg (mean ±SD) in the primi group and 53.3±7.0 kg (mean ±SD) in the multi-group. In the primi group, the majority, 46(80.74%) mothers had an emergency cesarean section, and in the multi-group, 30(69.8%) had an elective cesarean section. A systolic and diastolic blood pressure comparison did not show any statistically significant difference between the two groups. Indications of elective CS gestational diabetes mellitus were found to be 4(36.4%) in primi gravida and 2(6.7%) in multigravida, which was statistically significant ($p<0.05$) between the two groups. However, other indications of elective CS were not statistically significant ($p>0.05$) between the two groups. Indications of emergency CS: The majority, 15(32.6%) patients, had failed induction in primi gravida and 6(46.2%) in multigravida. This was followed by 14(30.4%) had post-dated pregnancy in primi gravida and 6(46.2%) in multigravida. Indications of emergency CS were not statistically significant ($p>0.05$) between the two groups. In primi groups, 8.8% of patients had haemorrhage per operative complication; in multi groups, 7.0% had haemorrhage. In post-

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operative complication, in primi groups, 10.5% of patients had wound infection, and in multi groups, 11.6% had wound complications.

Conclusion: Risk factors associated with emergency cesarean section were irregular/no antenatal care, poor educational level, most of the patients were homemakers, and most of them came from low socioeconomic families. Major decision-makers in their families were husbands and mother-in-laws. Common indications were failed induction, cephalo pelvic disproportion, low-lying placenta, pre-eclampsia, malposition, and breech presentation.

Keywords: Post-partum; Complications; Cesarean section

Introduction

Cesarean section is an operative procedure where the fetuses, after the end of the 28th week, are delivered through an incision on the abdominal and uterine wall [1]. Cesarean section (CS) is an ancient operation. It has evolved from being a post-mortem operation to becoming a lifesaving procedure for both the mother and her baby [2]. The Safe Motherhood Initiative is a global effort to reduce maternal mortality and morbidity. Modern obstetrical practice aims to achieve a healthy mother and baby by properly managing obstetrical problems. The cesarean section plays an important role in getting better outcomes for both mother and fetus by reducing the danger to their lives. Nowadays, cesarean section become one of the most frequently practiced major obstetric operations performed for the interest of uncomplicated childbirth and fetomaternal outcome, done either electively or on an emergency basis. Globally, CS rates are estimated to vary from approximately. 0.4% in Chad, Africa, and 40% in China [3,4]. Higher CS rates are reported in private hospitals, and in certain centres in Brazil, CS rates of 70-80% have been reported [5,6]. Globally, the increased rates of CS are positively associated with maternal mortality and severe morbidity, even after adjusting for risk factors [4&7]. Therefore, a concerted effort should be made to reduce the rising CS rates. World Health Organization (WHO) estimates the caesarean section rate is between 10% to 15% of all births in developed countries around the globe, 14.3% for less developed countries and 2% for the least developed countries [8]. In the last twenty years, the caesarean section rate has steadily increased. The underlying causes vary from country to country and community to community. In developing countries like Bangladesh, factors are more related to poor socio-demographic factors, illiteracy, ignorance, unawareness and unavailability of proper antenatal care, injudicious home handling of labour, and lack of advanced scientific facilities to detect high-risk pregnancies leading to undiagnosed vulnerable pregnancies, more prone to emergency caesarean section delivery. Dhaka Medical College Hospital (DMCH) is an important and well-known tertiary referral hospital where emergency caesarean section is high, as many unbooked cases are diagnosed as emergencies after having been mismanaged outside. This scenario is more or less the same in all over the countries of this subcontinent. Improving the quality and availability of antenatal care and judicious management of labour by imposing timely interventions and eliminating unnecessary interventions can reduce the cesarean section rate [8]. Labour induction is one of the most common interventions in Obstetrics, performed in approximately 15% of all pregnancies [9,10]. Underlying reasons include fetal growth restriction, premature rupture of membranes, preeclampsia, intrahepatic cholestasis of pregnancy, and, most commonly, post-dated pregnancy. Several studies have addressed the risk of emergency cesarean section after induced delivery. However, the study populations in these studies have differed in maternal parity, gestational age, cervical status, and indication for induction, making the results difficult to compare [11,12]. When labour is induced, intravaginal or intracervical prostaglandins (PG) or a transcervical application of a balloon catheter (transcervical catheter) are the methods of choice for cervical ripening. Whether the two methods differ in the risk of emergency cesarean section is still unclear. As with other surgeries, emergency cesarean section is not free from hazards. The maternal death rate is less than 0.02%, but that is four times higher in comparison to vaginal delivery [8]. Death occurs due to immediate complications like hemorrhage, shock, anesthetic hazard, infection, thromboembolism, etc. Late complications include incisional hernia, intestinal obstruction due to adhesion and bands, scar rupture in a subsequent pregnancy, and placental abnormality in the next pregnancy. Fetal death occurs due to complications like prematurity, asphyxia, and respiratory distress syndrome, and the rate is higher in emergency cesarean section, at about 22.2% [8]. Before the availability of wide-spectrum antibiotics, blood transfusion facilities and good anesthetic techniques, cesarean section was used only to save the life of the mother. It was met with a mortality of 50-70%. With the immense advances in anesthetic services and improved surgical techniques, the morbidity and mortality of this procedure have come down considerably. In a previous study, it was found that maternal mortality due to cesarean delivery was 2.2 per 1,000,000 in the United States [13]. Elective cesarean is a term used when the procedure is done at a pre-arranged time during pregnancy to ensure the best quality of obstetrics, anesthesia, neonatal resuscitation, and nursing services. The procedure is called emergency cesarean section when performed due to unforeseen or acute obstetric emergencies [14]. It is seen that morbidity and mortality are associated more with emergency procedures than with elective procedures [15,16]. For emergency cesarean section, pregnant women are usually not checked for their anesthetic fitness and may remain hemodynamically unstable, anaemic or infective. There are various factors for high morbidity

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and mortality. More often, women are not psychologically prepared to have a cesarean delivery, and that could lead to puerperal psychosis and fear of repeat caesarean section in the next pregnancy. The improved safety of surgery with modern anesthetic techniques, aseptic and antiseptic precautions, availability of antibiotics, and the advent of blood transfusion with minimal incidence of cross-reaction and intravenous fluid have made the emergency caesarean section more successful procedure and increasingly less hazardous. In emergencies, though caesarean section is done to avoid unforeseen complications, indications should be justified and should not be practiced unethically for hospital or doctor's benefit. Poverty, illiteracy, lack of health facilities and transportation, and trial of labour at home by untrained personnel add to the problem of high emergency caesarean rate in our set-up. Emergency caesarean sections have resulted in increased rates of infection, haemorrhage, organ damage and drug reactions. The objective of this research is to find out the early post-partum complications after caesarean section between primi and multigravida women, along with judicious indication and evaluation of risk factors so that we can reduce the elective and emergency caesarean section and its subsequent complications and raise the vaginal delivery rate as a natural process.

Methodology and Materials

This is a Cross-sectional study. The study was conducted at the Department of Obstetrics and Gynecology, Faridpur Medical College Hospital, Faridpur. It spanned six months, from January 2015 to June 2015. The study population was patients who underwent elective or emergency caesarean delivery in the Department of Obstetrics and Gynecology in Faridpur Medical College Hospital, Faridpur. Women with elective and emergency caesarean sections were recruited for the study purposively.

Inclusion criteria:

All women undergoing elective and emergency caesarean section between primi and multigravida for indications like-

- Patients who have h/o one caesarean section.
- The patients included both of whom started labour in the hospital after admission or were admitted with labour pain with H/O previous caesarean section.
- IUGR- mild, moderate and severe.
- Faetal distress- detected in CTG monitoring.
- Breach presentation-primi depends upon the size of the baby and maternal pelvis.
- Multiple pregnancy.
- Pre-term labour.
- Prolonged labour and obstructed labour.
- Antepartum hemorrhage
- Malpresentation-transeverse lie.
- Previous C/S in non-recurrent cause.
- CPD.
- Patient request.

Exclusion criteria:

- Term pregnancy with medical diseases such as heart diseases, chronic liver diseases, renal complications, etc.
- Eclampsia is not responding to conservative therapy.

Data were collected by interview, physical, and lab examination using a structured questionnaire containing all the variables of interest. The total cases of women with elective and emergency caesarean section admitted for delivery in the Department of Obstetrics and Gynecology in Faridpur Medical College Hospital, Faridpur, were asked for proper history. During the study period, 100 primi and multigravida cases were prospectively studied. The subject was informed in detail about the study, and informed consent was taken. At entry into the study, a detailed socio-demographic, medical and reproductive history was taken. The age of the patient was calculated in years. Monthly income was assessed by the monthly income of the husband and patient if the patient is an earning member. A detailed obstetrical history was taken, including clinical records, gestational age at delivery, physical examination, and investigation help. Subsequently, the diagnosis was confirmed, including booking status. A questionnaire was set up with objectives. Statistical analysis was done using the Statistical Package for Social Sciences version 16.0 for Windows (SPSS Inc., Chicago, Illinois, USA). The mean values were calculated for continuous variables. Frequencies and percentages indicated the quantitative observations. The chi-square test was used to analyze the categorical variables shown with cross-tabulation, and the student t-test was used for continuous variables between primi and multigravida. P values <0.05 were considered statistically significant.

Ethical implications:

No data or any information was collected without the permission of the patient. Participation in this research was fully voluntary. The respondents remained free to withdraw their participation at any stage or time of the study. Written informed consent was taken from each patient. Prior to consent, the aim and purpose of the research were explained to them. Confidentiality was assured, and anonymity was maintained; no participants were identified in any report or publication of this study.

Result

Table 1 presents the age distribution of study patients, revealing that almost two-thirds (63.2%) of primi gravida

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patients and 30 (69.8%) of multigravida patients belonged to the 21-30 years age group. The mean age was 22.9±4.1 years for primigravida and 26.2±5.3 years for multigravida. The observed difference was statistically significant (p<0.05) between the two groups. In Table 2, the socioeconomic status of the study patients is displayed. It was observed that almost three-fourths (71.9%) of primigravida patients and 28 (65.1%) of multigravida patients came from the lower-income group. The difference was not statistically significant (p>0.05) between the two groups. Table 3 presents the gestational age of study patients, indicating that more than half (54.4%) of primigravida patients and 20 (46.5%) of multigravida patients had term gestational age (37-40 weeks). The mean gestational age was 37.6±3.4 weeks for primigravida and 38.1±2.8 weeks for multigravida. The mean difference was not statistically significant (p>0.05) between the two groups. Table 4 highlights the antenatal care of study patients, showing that more than half (52.6%) of primigravida patients and 23 (53.5%) of multigravida patients received irregular antenatal care. The difference was not statistically significant (p>0.05) between the two groups. Table 5 shows the weight distribution of study patients, with 42.1% of primigravida patients and 65.1% of multigravida patients having a weight between 50-59 kg. The mean weight was 52.8±5.4 kg for primigravida and 53.3±7.0 kg for multigravida. The difference was not statistically significant (p>0.05) between the two groups. Table 6 highlights caesarean section among study patients, indicating that 19.3% of primigravida patients and 69.8% of multigravida patients had elective CS. The difference was statistically significant (p<0.05) between the two groups. Table 7 presents the blood pressure of study patients, with a mean systolic blood pressure of 115.4±16.8 mmHg in primigravida and 112.8±14.5 mmHg in multigravida. The mean diastolic blood pressure was 74.2±11.9 mmHg in primigravida and 72.1±10.9 mmHg in multigravida. No statistically significant difference was observed (p>0.05) between the two groups. In Table 8, elective caesarean section data reveal gestational diabetes mellitus is significantly higher in primi gravida (36.4%) compared to multigravida (6.7%). Other indications, including antepartum hemorrhage, malpresentation, and intrauterine growth restriction, did not show statistically significant differences (p>0.05) between the two groups. Table 9 shows emergency caesarean section results, with gestational diabetes mellitus found in 6.5% of primi gravida and 7.7% of multigravida. Other indications, such as antepartum hemorrhage, malpresentation, and cephalopelvic disproportion, did not exhibit statistically significant differences (p>0.05) between the two groups. Table 10 expresses perioperative complications, with 8.8% of haemorrhage, 5.3% of shock, and 1.8% of anesthetic hazards in primigravida. In multigravida, 7.0% had haemorrhage, 2.3% experienced shock, and 4.7% encountered anesthetic hazards. Postoperative complications included haemorrhage (5.3%), infection (1.8%), and wound complications (10.5%) in primigravida, while multigravida showed haemorrhage (4.7%), infection (7.0%), intestinal obstruction (2.3%), and wound complications (11.6%). Table 11 displays the sex distribution of newborns, indicating that more than half (50.9%) were male in primigravida and 46.5% in multigravida. No statistically significant difference (P>0.05) was observed between the two groups. In Table 12, three babies (5.3%) were stillborn in primigravida and three (7.0%) in multigravida. Early neonatal death occurred in 1.8% of primigravida, while no cases were observed in multigravida. Deaths due to asphyxia were 5.3% in primigravida and 4.7% in multigravida, with one baby (1.8%) in primigravida and 2.3% in multigravida succumbing to septicemia. No statistically significant differences (P>0.05) were found between the two groups. Table 13 reveals the birth weight of newborns, with 49.1% of babies in primigravida and 42.5% in multigravida classified as normal birth weight. The mean birth weight was 2.5±0.6 kg in primigravida and 2.7±0.6 kg in multigravida. No statistically significant difference (P>0.05) was observed between the two groups. Finally, Table 14 demonstrates APGAR scores, with scores ≥7 at 1st minute found in 86.8% of primigravida and 82.5% of multigravida. APGAR scores ≥7 at 5th minute were observed in 90.6% of primigravida and 87.5% of multigravida. No statistically significant differences (P>0.05) were noted between the two groups.

Table 1: Distribution of the study patients according to age (N=100).

Age (in years)	Primi gravida (N=57)		Multi gravida (N=43)		*P* value
	n	%	n	%	
≤20	19	33.3	4	9.3	0.001
21-30	36	63.2	30	69.8	
>30	2	3.5	9	20.9	
Mean±SD	22.9±4.1		26.2±5.3		
Range (min-max)	(18-39)		(18-41)		

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Table 2: Distribution of the study patient according to socioeconomic status (N=100).

Socioeconomic status	Primi gravida (N=57)		Multi gravida (N=43)		*P* value
	n	%	n	%	
Lower	41	71.9	28	65.1	0.758
Middle	10	17.5	9	20.9	
Upper	6	10.5	6	14	

Table 3: Distribution of the study patient according to gestational age (N=100).

Gestational age	Primi gravida (N=57)		Multi gravida (N=43)		*P* value
	n	%	n	%	
Preterm (≤36 weeks)	14	24.6	16	37.2	0.434
Term (37-40 weeks)	31	54.4	20	46.5	
Postdated (>40 weeks)	12	21.1	7	16.3	
Mean±SD	37.6 ±3.4		38.1±2.8		
Range (min-max)	(28-43)		(26-42)		

Table 4: Distribution of the study patient according to antenatal care (N=100).

Antenatal care	Primi gravida (N=57)		Multi gravida (N=43)		*P* value
	n	%	n	%	
Regular	17	29.8	14	32.6	0.878
Irregular	30	52.6	23	53.5	
Not received ANC	10	17.5	6	14	

Table 5: Distribution of the study patient according to weight (N=100)

Weight (kg)	Primi gravida (N=57)		Multi gravida (N=43)		*P* value
	n	%	n	%	
40-49	22	38.6	8	18.6	0.687
50-59	24	42.1	28	65.1	
60-69	8	14	6	14	
≥70	3	5.3	1	2.3	
Mean±SD	52.8 ±5.4		53.3±7.0		
Range	38-72		40	0	

Table 6: Distribution of the study patient according to caesarean section (N=100)

Caesarean section	Primi gravida (N=57)		Multi gravida (N=43)		*P* value
	n	%	n	%	
Elective	11	19.3	30	69.8	0.001
Emergency	46	80.7	13	30.2	

Table 7: Distribution of the study patient according to blood pressure (N=100)

Blood pressure	Primi gravida (N=57)	Multi gravida (N=43)	P value
	Mean±SD	Mean±SD	
Systolic BP (mmHg)	115.4±16.8	112.8±14.5	0.418
Range (min-max)	(88-140)	(90-158)	
Diastolic BP (mmHg)	74.2±11.9	72.1±10.9	0.367
Range (min-max)	(60-100)	(50-100)	

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Table 8: Distribution of the study patients according to indications of elective CS (N=41)

Indicationsof elective CS	Primi gravida (N=57)		Multi gravida (N=43)	
	n	%	n	%
Gestational diabetes mellitus	4	36.4	2	6.7
Antepartum hamorrhage	3	27.3	3	10
Malpresentation	2	18.2	3	10
Intrauterine growth restriction	0	0	1	3.3
Cephalo pelvic disproportion	2	18.2	0	0
Oligohydramnios	1	9.1	0	0
PROM	2	18.2	1	3.3

Table 9: Distribution of the study patients according to indications of emergency CS (N=59)

Indications of emergency CS	Primi gravida (N=46)		Multi gravida (N=13)	
	n	%	n	%
Gestational diabetes mellitus	3	6.5	1	7.7
Antepartum hamorrhage	2	4.3	1	7.7
Malpresentation	1	2.2	1	7.7
Intrauterine growth restriction	3	6.5	1	7.7
Cephalo pelvic disproportion	10	21.7	4	30.8
Obstructed labour	7	15.2	1	7.7
Fetal distress	8	17.4	1	7.7
Post-dated pregnancy	14	30.4	6	46.2
Eclampsia	2	4.3	0	0
Pre-eclampsia	6	13	2	15.4
Oligohydramnios	2	4.3	1	7.7
PROM	3	6.5	2	15.4
Failed induction	15	32.6	6	46.2
Prolong 2nd stage of labour	2	4.3	0	0

Table 10: Distribution of the study patient according to maternal complications (N=100).

Maternal complications	Primi gravida (N=57)		Multi gravida (N=43)	
	n	%	n	%
Per operative				
Haemorrhage	5	8.8	3	7
Shock	3	5.3	1	2.3
Anaesthetic hazards	1	1.8	2	4.7
Postoperative				
Haemorrhage	3	5.3	2	4.7
Infection	1	1.8	3	7
Intestinal obstruction	0	0	1	2.3
Deep vein thrombosis	0	0	0	0
Wound complications	6	10.5	5	11.6

Table 11: Sex distribution of the newborn babies (N=100)

Sex	Primi gravida (N=57)		Multi gravida (N=43)		*P* value
	n	%	n	%	
Male	29	50.9	20	46.5	0.665
Female	28	49.1	23	53.5	

ns= not significant, P value reached from chi-square test

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Table 12: Distribution of the study patients according to neonatal outcome (N=100)

Neonatal outcome	Primi gravida (N=57)		Multi gravida (N=43)		P value
	n	%	n	%	
Alive	53	93	40	93	0.645
Stillbirth	3	5.3	3	7	
Early neonatal death	1	1.8	0	0	
Cause of death					
Asphyxia	3	5.3	2	4.7	0.632
Septicemia	1	1.8	1	2.3	0.766

Table 13: Birth weight of the newborn babies (N=93*)

Birth weight (kg)	Primi gravida (N=57)		Multi gravida (N=43)		P value
	n	%	n	%	
≤1.0 kg (ELBW)	1	1.9	1	2.5	0.115
1.1-1.5 kg (VLBW)	2	3.8	2	5	
1.6-2.5 kg (LBW)	23	43.4	19	47.5	
2.6-4.0 (Normal)	26	49.1	17	42.5	
>4.0 (Macrosomia)	1	1.9	1	2.5	
Mean±SD	2.5±0.6		2.7±0.6		
Range (min-max)	(1-4.5)		(1-4)		

Table 14: APGAR score of the newborn babies (N=93*)

APGAR score	Primi gravida (N=57)		Multi gravida (N=43)		P value
	n	%	n	%	
APGAR score at 1st min					
<7	7	13.2	7	17.5	0.566
≥7	46	86.8	33	82.5	
APGAR score at 5th min					
<7	5	9.4	5	12.5	0.441
≥7	48	90.6	35	87.5	

Discussion

In modern obstetrics, Caesarean section is a major surgical procedure for delivery. Despite its low rate of maternal morbidity and mortality due to improved surgical technique and modern anaesthetic skills, it still carries a slightly greater risk than normal vaginal delivery, and the risk is more in subsequent pregnancies. This cross-sectional study was carried out to find out the demographic characteristics of the patients who undergo cesarean section between primi and multigravida women and to find out the indications of the elective and emergency cesarean section between prim gravida and multigravida patients and also to compare the feto-maternal outcome between prim gravida and multigravida patients delivered by cesarean section. A total of 100 patients who underwent elective or emergency cesarean delivery in the Department of Obstetrics and Gynecology in Faridpur Medical College Hospital, Faridpur, between January 2015 and June 2015 were included in this study. Patients who have a history of one cesarean section, including both of those who started labour in the hospital after admission or were admitted with labour pain with h/o previous cesarean section, IUGR-mild and moderate and severe, faetal distress- detected in CTG monitoring, breach presentation primi, depends upon the size of the baby and maternal pelvis, multiple pregnancies, pre-term labour, prolonged labour, and obstructed labour, malpresentation-transverse lie, antepartum hemorrhage, CPD, previous C/S in non-recurrent cause and patient request were enrolled in this study. Term pregnancies with medical diseases and eclampsia not responding to conservative therapy were excluded from the study. The present study findings were discussed and compared with previously published relevant studies. In this present study, it was observed that almost two-thirds (63.2%) of patients belonged to the age 21-30 years group in primi gravida and 30(69.8%) in multigravida. The mean age was 22.9±4.1 years in primi

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gravida and 26.2±5.3 years in multigravida. The difference between the two groups was statistically significant (p<0.05). Similarly, Nahar (2009) showed the commonest (77.0%) age group of patients being operated in the third decade of maximum fertility [18]. In another study, Zaman (2008) showed that 89.0% of patients were in this decade [19]. In Latin American hospitals, Geen et al. (1982) showed maximum incidence was in >30 years in primi patients, which might reflect delayed marriage in Western countries [20]. Ryding and Wijma (2000) showed that the mean age in this study was 30 years, ranging from 23 to 42 years [21]. In another study, Nieminen et al. (2009) obtained a median age ranging from 16 to 44 years [22]. Fesseha et al. (2011) showed that two-thirds of women were in the third decade, but only 6% were younger than 20, and their average age was 26.7 years [23]. In this current study, it was observed that almost three-fourths (71.9%) of the patients came from the lower-income group in primi gravida and 28(65.1%) in multigravida. The difference between the two groups was not statistically significant (p>0.05). Primigravid women of higher socioeconomic status are more likely to have a cesarean section 22.9% compared to 13.2% of women who live in low economic families on account of labour dystocia and maternal distress, as studied by Thivierge et al. (2004) [24]. Women in the lowest-income urban neighbourhoods had lower crude cesarean section rates, as Leeb (2005) reported [25]. However, when adjusted for age, this relationship reversed. Based on this analysis, women living in the lowest-income areas were significantly more likely to have cesarean deliveries (24.9% observed rate for areas in the lowest-income quintile) than those in the most prosperous areas (23.3% observed rate in the highest-income quintile neighbourhoods) (p<0.05) obtained by Leeb (2005) [25]. A similar trend was found by the above authors when rural areas were included in the analysis. In this series, it was observed that more than half (54.4%) of patients had term (37-40 weeks) gestational age in primi gravida and 20(46.5%) in multigravida. The mean gestational age was 37.6±3.4 weeks in primi gravida and 38.1±2.8 weeks in multigravida. The mean difference between the two groups was not statistically significant (p>0.05). Hassan et al. (2008) showed the duration of gestation at which a maximum number of emergency CS was done, i.e. >37 weeks in 68.45% of patients, followed by 34-36 weeks in 27.75% between 31-33 weeks, in 1.85% and <30 weeks in 1.85% [32]. Das et al. (2010) showed that most (75.9%) of their study patients had gestational age 37-40 weeks, comparable with the current study [26]. The current study observed that most women knew the antenatal checkup. The underprivileged also had ideas but could not receive regular ANC due to negligence, monetary problems, and financial problems. More than half (52.6%) of patients received irregular antenatal care in primi gravida and 23(53.5%) in multigravida. The difference between the two groups was not statistically significant (p>0.05). In another study, Nazia (2002) showed that nearly two-thirds (66.0%) of pregnant women did not receive antenatal checkups during their pregnancy [27]. In our country, Mithila (2012) showed that almost a fourth (72.0%) of the women received antenatal checkups irregularly (2 or 3 visits), only 3.0% received regular antenatal checkups, and 25.0% of women did not receive any antenatal care during their pregnancy period [28]. This current study observed that 24(42.1%) patients weighed 50-59 kg in primi gravida and 28(65.1%) in multigravida. The mean weight was 52.8±5.4 kg in primi gravida and 53.3±7.0 kg in multigravida. The difference between the two groups was not statistically significant (p>0.05). In this series, it was observed that 11(19.3%) patients were elective CS in primi gravida and 30(69.8%) in multi- gravida. The difference between the two groups was statistically significant (p<0.05). Another Sultana (2004) found that elective cesarean section was 53.0% and emergency cesarean section was 47.0%, which differs from the current study, which may be due to their being observed in both parity. On the other hand, the rate of emergency and elective sections varies from country to country and also from hospital to hospital. Naidoo and Moodley (2009) have shown 52.2% elective CS, 39.2% emergency CS, and 8.6% urgent CS [29]. There are higher incidences of elective cesarean section in Western countries due to their sophisticated electronic foetal monitoring system, e.g. cardiotocography foetal PH sampling, Doppler, etc., which can detect foetal jeopardy in early-stage Amrika et al. (1981) [30]. In this present study, it was observed that mean systolic blood pressure was found to be 115.4±16.8 mmHg in primi gravida and 112.8±14.5 mmHg in multigravida. The mean diastolic blood pressure was 74.2±11.9 mmHg in primi gravida and 72.1±10.9 mmHg in multi gravida. The difference between the two groups was not statistically significant (p>0.05). Elvedi-Gasparovic et al. (2006) and Keerath et al. (2012) also made similar observations regarding systolic and diastolic blood pressure [14,31]. In this current study, it was observed that in elective cesarean section, gestational diabetes mellitus was found to be 4(36.4%) in primi gravida and 2(6.7%) in multigravida. Antepartum haemorrhage was found 3(27.3%) in primi gravida and 3(10.0%) in multigravida. Malpresentation was found 2(18.2%) in primi gravida and 3(10.0%) in multi gravida. Intrauterine growth restriction was 1(3.3%) in multigravida. Cephalo pelvic disproportion was 2(18.2%) in primi gravida. Oligohydramnios was found 1(9.1%) in primi gravida. PROM was found 2(18.2%) in primi gravida and 1(3.3%) in multigravida. Gestational diabetes mellitus was statistically significant but other complications were not statistically significant (p>0.05) between the two groups. In another study Hassan et al. (2008) obtained antepartum hemorrhage (APH) in 4.34% of group I patients and 14.8% of group II patients [32]. The most frequent indication for the emergency cesarean section was abruption placenta, as Elvedi-Gasparovic et al. (2006) mentioned [14]. In Mymensingh Medical College Hospital,

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Nahar (2009) observed bad obstetric history in 13.8% of multipara, which is higher than in the current study [18]. In malpresentation, the breech presentation was 3 (4.8%) in the primi group and 4(10.8%) in the multi-group. Fesseha et al. (2011) obtained the primary indications for cesarean were breech/multiple gestations/malpresentation in 14.0% of cases, and the public sector registered the largest percentage of cases of cesarean delivery was due to breech/multiple gestations/malpresentation 17.0% [23]. In this series, it was observed that in emergency cesarean section, gestational diabetes mellitus was found to be 3(6.5%) in primi gravida and 1(7.7%) in multigravida. anterpartum haemorrhage was found 2(4.3%) in primi gravida and 1(7.7%) in multi gravida. Malpresentation was found 1(2.2%) in primi gravida and 1(7.7%) in multi gravida. Intrauterine growth restriction was found 3(6.5%) in primi gravida and 1(7.7%) in multigravida. Cephalo pelvic disproportion was found 10(21.7%) in primi gravida and 4(30.8%) in multigravida. The differences between the two groups were not statistically significant ($p>0.05$). Fesseha et al. (2011) and Hassan et al. (2008) reported that the primary indications for cesarean were cephalopelvic disproportion (CPD) in 34% and scar tenderness in 27.75% respectively of their study patients [23,32]. Hassan, Javaid, and Tariq (2008) showed uncontrolled pregnancy-induced hypertension in 16.65% of patients who underwent emergency cesarean section [32]. Elvedi-Gasparovic et al. (2006) mentioned that the most frequent indication for emergency cesarean section was preeclampsia [14]. Hassan et al. (2008) and Fesseha et al. (2011) mentioned that the primary indications for cesarean were fetal distress at 15.0% and 12.95%, respectively [23,32]. Nahar's (2009) study showed foetal distress obstructed labour was mainly responsible for LSCS in prim gravida, and previous LSCS was the main indication in multigravida [18]. The above findings are comparable with the current study. In this present study, it was observed that per operative complication, in primi gravida, 5(8.8%) patients had a haemorrhage, 3(5.3%) had a shock, and 1(1.8%) had anaesthetic hazards. In multi gravida 3(7.0%) had haemorrhage, 1(2.3%) had shock and 2(4.7%) had anesthetic hazards. Post-operative complication, in primi gravida 3(5.3%) patients had haemorrhage, 1(1.8%) had infection and 6(10.5%) had wound complications. In multi groups 2(4.7%) had haemorrhage, 3(7.0%) had infection, 1(2.3%) had developed intestinal obstruction and 5(11.6%) had wound complications. This incidence of infectious morbidity varies between 2 and 8% [33]. This is very common in those patients from poor socioeconomic status who have undergone operative delivery or had premature rupture of the membranes, had prolonged labour, and those examined for multiple pelvic examinations [33]. Around seven 6.9% in group, I and 7.0% in group II patients developed urinary tract infections. Mastitis was present in 1.0% in group I and 1.1% in group II, 1.0% and 1.1% in group I and group II, respectively, developed vesicovaginal fistula in the later part of early puerperium and all the cases had a history of long trial at home and presented as obstructed labour. Obstetric palsy was found in 0.5% of group I and 0.6% of group II patients who had also presented late with obstructed labour. Three patients developed heart failure in group I and two patients in group II. Puerperal blue was present in 3 patients in group I and two in group II, possibly due to the big drop in estrogen and progesterone hormone levels, including thyroid levels. Early postpartum morbidity following cesarean section, especially infectious morbidity, and other complications, was more common in the obstructed labour group. Puerperal sepsis was the second most common cause of maternal morbidity in the developing world [34]. However, there has been a dramatic decline in the prevalence of serious puerperal infection due to prophylactic antibiotics. Leth et al. (2009) mentioned that there was a 4 to 5-fold increased risk of acquiring a postpartum infection after cesarean section compared with vaginal delivery [35]. The increased risk was mostly due to higher numbers of wound and urinary tract infections. (The incidence of bloodstream was too small for significance.) In all three infection groups, the women having emergency cesarean section had a higher proportion of infections than those having an elective cesarean section. The authors suggested that these results could contribute to clinical decision-making for women contemplating elective cesarean section. In another study done in developed countries, Chaim et al. (2000) found that the wound infection rate after a cesarean section was only 3.97%, which is lower than in the current study [35]. In this current study, it was observed that more than half (50.9%) of babies were in primi gravida and 20(46.5%) in multigravida. The difference between the two groups was not statistically significant ($P>0.05$). In this series, it was observed that three (5.3%) babies were stillbirths in primi gravida and 3(7.0%) in multigravida. Early neonatal death was observed 1(1.8%) in the primi group but not observed in multigravida. Three (5.3%) babies were dead due to asphyxia in primi gravida and 2(4.7%) in multigravida. One (1.8%) baby was death due to septicemia in primi gravida and 1(2.3%) in multigravida. The difference between the two groups was not statistically significant ($P>0.05$). In this present study, it was observed that almost half (49.1%) of babies had normal birth weight in primi gravida and 17(42.5%) in multigravida. The mean birth weight was 2.5±0.6 kg in primi gravida and 2.7±0.6 kg in multigravida. The mean difference between the two groups was not statistically significant ($P>0.05$). Shah et al. (2009) showed that the median low birth weight rate was 9.4% in their study patients [37]. Elvedi-Gasparovic et al. (2006) mentioned that patients who underwent emergency cesarean section gave birth less than the ones in the elective cesarean section group [14]. In this series, it was observed that APGAR score ≥seven at 1st min was found to be 46(86.8%) in primi gravida and 33(82.5%) in multigravida. APGAR score ≥7 at 5th min was found 48(90.6%) in primi gravida and 35(87.5%)

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in multi gravida. The difference between the two groups was not statistically significant (P>0.05).

Limitations of the study:

Because of illiteracy and the need for more awareness, obtaining an accurate record of LMP from the patients will be a problem. Routine USG will sometimes be unavailable, so determining maturity sometimes poses a problem. Monitoring of the patient in labour will be done clinically only. This study was conducted over only six months, and one tertiary-level hospital may only reflect part of the whole country. A large-scale study needs to be conducted to reach a definitive conclusion.

Conclusion and Recommendations

This study aimed to assess early post-partum complications following cesarean section, focusing on patients in their third decade from low socioeconomic backgrounds. Irregular antenatal checkups were prevalent, with gestational diabetes mellitus higher in primigravida. Emergency cesarean indications included gestational diabetes, antepartum hemorrhage, malpresentation, and others. Postoperatively, hemorrhage and wound complications were common. Newborns often had low birth weights. Wound infection, endometritis, and urinary tract infection were frequent morbidities in low socioeconomic classes. Addressing these risks involves promoting regular antenatal checkups, training birth attendants, improving rural transport, and ensuring judicious cesarean decisions for a healthy outcome. Implementing universal protocols and educating women on their delivery rights are essential to counter the rising cesarean section rates.

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