

Common Puerperal Morbidity after Caesarian Section : Study in a tertiary level hospital, Dhaka, Bangladesh

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Abstract

Background: The postpartum period after birth has largely been divided into three sections of puerperium. The first 24 hours after parturition is recognized as immediate puerperium, the first week after postpartum is known as early puerperium, and remote puerperium, which is usually approximately 6 weeks. After a caesarean section, there is a higher chance of early puerperal complications, with symptoms like fever, infections, etc. The present study was conducted to help determine the common complications of early puerperium, in hopes to decrease the chances of future complications.

Objective: The aim of the study was to observe the common complications of early puerperium following caesarean section.

Method: This was a cross-sectional hospital-based observational study. The total sample size was 60. Patients who underwent caesarean section and were in the early puerperal period were selected for this study. The study duration was six months from January 2010 to July 2010.

Result: The incidence of morbidities was 20%. wound infection (50%) and endometritis (45%) were the two most common complications, urinary tract infection (35%) being next in order. Mastitis was found to be relatively uncommon.

Conclusion: The present study found a high correlation of puerperal complications with poor socio-economic status and lack of proper antenatal care. Wound infection and UTI were the most common complications faced after emergency CS. Obstructed labor and prolonged labor were two high-risk factors for puerperal complications. The long-term sequelae of early puerperal infections morbidities should not be neglected.

Keywords: Puerperium, Caesarean Section, Complications, Endomyometritis

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I. Introduction

The puerperium of the postpartum period generally lasts 6 weeks. It is the period of adjustment after the delivery when the anatomical and physiological changes of pregnancy are reversed and the body starts to return to its normal non-pregnant state^[1]. Although it is a time of great importance for both the mother and her baby, this aspect of maternity care has received comparatively less attention compared to pregnancy and delivery. When a healthy pregnant woman with no obstetric or medical risk factor goes into spontaneous labor, there is a high likelihood of a normal delivery. Despite that, about 5,80,000 women in the world die from pregnancy and childbirth each year, and maternal mortality in developing countries is 100 times higher than the developed countries^[2]. The majority of these deaths and complications occur during the postpartum period. The postpartum period is largely divided into three sections; the immediate puerperium, the early puerperium, and the remote puerperium. The first week after childbirth is the early puerperium^[1]. Puerperal infectious morbidity affects 2-8% of pregnant women and is among the most prominent puerperal complications. Infectious morbidity is more common in those who have undergone operative delivery and repeated vaginal examinations^[2]. In our country, only about 16% of pregnant women receive proper care from skilled birth attendants during their delivery like doctors, paramedics, and trained traditional birth attendants (TBA)². Almost 91.6% of delivery occurs at home, among which 80% of childbirths are assisted by relatives and untrained

TBAs in our country. Illiteracy, ignorance, early marriage, lack of antenatal care, failure to seek family planning advice due to social taboos, shyness, and poverty are some of the main causes of this severe lack of proper care^[2]. The ratio of emergency caesarean section is higher than elective caesarean section^[3]. Most of the abnormalities of puerperium are related either to the operation, or to the underlying indications that led to the operation, so complications are higher following emergency sections, compared to the elective procedure. The prevalence of these complications are higher after CS compared to normal delivery. CS can not only affect the health of the mother, but also the newborn babies, but it is still an important medical technique intended for the better of medical practice. The puerperal complications often affect the physical appearance of a woman, even more so in CS cases. It is common knowledge that such changes can often lead to depression. But despite this well-known fact, very few studies have been conducted on the aftereffects of puerperal complications. Other than the mental distress, the patients undergoing cesarean section for obstructed labor can develop septicemia, renal failure, and genitourinary fistulas^[4]. Cesarean section is the most commonly performed operation in obstetric practice. The term denotes the delivery of the foetus, placenta, and membrane through an incision in the abdominal and uterine walls^[5]. Cesarean section is of 2 types-elective and emergency, according to whether the procedure has been performed after the start of labor or early complications by reviewing the puerperal cases in an early post. Although emergency CS has seen an increased mortality and morbidity rate, elective CS also has some risks. The present study was conducted on the early puerperal complication faced by new women after either elective or emergency type of CS.

II. Methods

This cross-sectional hospital-based observational study was carried out in the Obstetrics and Gynaecology department of Bangabandhu Sheikh Mujib Medical University (BSMMU) Dhaka from January 2010 to July 2010. Sixty patients who had been admitted in the respective department were willing to share the required data and those who underwent cesarean section during that study period were randomly selected for an initial assessment. Respondents data was collected by history taking, clinical examinations, and investigations like wound swab culture for wound infections and urine culture for urinary tract infections and ultrasonogram of lower abdomen for diagnosis of endomyometritis. Others morbidities like mastitis, puerperal blue, and obstetric palsy were diagnosed clinically. All the data are recorded into a preformed data collection sheet. among two hundred patients with the permission of hospital authority. Informed consent was obtained from each patient, and required permission was taken from the hospital authority.

III. Results

Out of the total 300 patients, 60 patients (20%) showed early puerperal morbidities. Among those 60, 55% were between the age of 21-30 years. 25% were under 20 years of age, and the remaining 20% were older than 30 years. Socio-economically, 70% of the participants were from poor households. 20% were from lower-income households and only 10% were from middle-income households. Only 5% received regular antenatal care, and 25% received irregular care. The remaining 70% received no antenatal care at all. 90% were housewives. Among the puerperal morbidity cases, 50% had wound infection, 45% had endomyometritis, and 35% had urinary tract infection. Among the common risk factors for early puerperal morbidities after a caesarean section, obstructed labor had the highest frequency, with 40% falling in this category. 30% had prolonged labor, and 20% had prolonged rupture membrane. Chorioamnionitis was also present as a risk factor for 6 participants.

Table-1: Age distribution, socio-economic status, Antenatal care, and Occupation of the study subjects (n=60).

		No of patients	Percentage (%)
Age Distribution of the patients	<20 years	15	25
	21-30 years	33	55
	>30 years	12	20
Socio-economic status	Poor	42	70
	Lower	12	20
	Middle class	6	10
Relationship with antenatal care	Regular	3	5
	Irregular	15	25

	No care	42	70
Occupation	Housewife	54	90
	Service Holder	6	10

Among the total participants of the study, only 60 showed early puerperal morbidities. Among those 60, 55% were between the age of 21-30 years. 25% were under 20 years of age, and the remaining 20% were older than 30 years. Socio-economically, 70% of the participants were from poor households. 20% were from lower-income households and only 10% were from middle-income households. None of the participants were from higher-income households. The relationship of antenatal care with participants was very poor. Only 5% received regular antenatal care, and 25% received irregular care. The remaining 70% received no antenatal care at all. Occupation-wise, only 10% were service holders, and 90% were housewives.

Table-2: Types of post caesarean early puerperal morbidities (n=60).

Morbidities	No of patients	Percentage (%)
Wound Infection	30	50
Urinary Tract infection	21	35
Endomyometritis	27	45
Mastitis	3	5
Puerperal Blue	3	5
Obstetric palsy	3	5

Among the puerperal morbidity cases, 50% had wound infection, 45% had endomyometritis, and 35% had urinary tract infection. Mastitis, puerperal blue, and obstetric palsy each were present in 5% of the participants.

Table-3: Risk factor for early puerperal morbidities following caesarean section (n=60).

Risk Group	No of patients	Percentage (%)
Obstructed labor	24	40
Prolonged labor	18	30
Prolonged ruptured member	12	20
Chorioamnionitis	6	10

Among the common risk factors for early puerperal morbidities after a caesarean section, obstructed labor had the highest frequency, with 40% falling in this category. 30% had prolonged labor, and 20% had prolonged rupture membrane. Chorioamnionitis was also present as a risk factor for 6 participants.

IV. Discussion

The puerperal period is the period following birth when the anatomical and psychological changes of the body start to reverse the signs of pregnancy. This period is largely divided into three categories, and the first week after delivery is considered as early puerperal. During this period, there can be some complications without proper care, and the likelihood of such complications increases after emergency CS, compared to normal delivery. This happens mainly because of the lack of preparation in emergency CS cases. Today refinement in surgical technique, asepsis, antibiotics, therapy, blood transfusion, and anesthesia have reduced but not eliminated the risk associated with cesarean section. The attainment of a good result requires appropriate surgical and perinatal conditions and full knowledge of the possible consequences of deviating from the principle on which this major operation is based. The majority of maternal morbidity happens during the puerperium period.^[6] In a multi-hospital study by Akter T conducted from March 2004 to August 2004, the incidence of early puerperal complications was found to be 22%^[5], which is comparatively lower than previous studies. This shows the improvement of medical technology during this time period. But despite the many advancements in the medical sector, this incidence rate was still quite high in comparison to the studies of developed countries, where the incidence of puerperal complications was found to be 1.7% in one study^[7]. The

present study was conducted to collect data regarding the types of complications in hopes of preventing such complications in the future. The majority of the puerperal morbidity cases were from the age group of 21-30 years. Only 20% were older than 30 years. This might be influenced by our social tradition of marrying at a young age and starting a family. 70% of the puerperal complication cases were from poor households, and none of the cases were from high-income households. This also affected the relationship of antenatal care with the participants, as only 5% received regular care, and 70% received no antenatal care at all. This might be because high-income households had better antenatal care and medical care available to them. Only 10% of the participants were service holders, and the remaining 90% were housewives. This was also influenced by the common standards of our society as women are hardly allowed to work after marriage. The most common complication was wound infection. It must be stressed that the majority of the patients had more than one complication. For example, the patients who had wound infection also had concomitant endomyometritis or UTI. Wound infection was observed in 15 patients out of 24 patients with obstructed labor, and 6 patients out of 12 patients with prolonged ruptured members i.e., 50%, and among 50% of patients with prolonged labor. This study shows that early puerperal morbidity in post-caesarean patients was common among those who belonged to 21-30 years coming from the low socio-economic condition. This observation was almost similar to many other studies^[7-10]. In the present study, the incidence of wound infection and endomyometritis was quite high, in comparison to many studies of the developed world where the incidence of infection morbidities varied between 2-8%. The incidence was very common in low socioeconomic status, operative delivery, premature rupture of the membranes, prolong labor, and those with multiple pelvic examinations^[11]. Gerber B in their study showed that UTI was significantly more frequent in women subjected to catheterization (54.5%) compare to non-catheterization (24.4%).^[12] The incidence of puerperal mastitis was low (Only 3 in 60 Patients), which might be due to the fact that our patients were well-motivated and culturally adapted to breastfeeding. There were no cases of breast abscess in our study, which had 2.9% incidence in the first 7 weeks post-partum in a western study.^[13] There were only two cases that experienced obstetric palsy. They had a history of a long trial at home and a trial of instrumental delivery by forceps. There was no case of thromboembolism in the present study, which is a common occurrence in the developed world.^[14] In studies conducted in this country; no case of thromboembolism has been recorded. The prevalence of thromboembolism is however low in Asian and African countries. It is more common in operative delivery^[4]. Pregnancy and puerperium are emotionally stressful periods for many women. Mood swings are commonly manifested by emotional lability, weepiness, irritability, and feeling blue^[11]. However, these occur much more frequently during the postpartum period of the 2-4 weeks after childbirth and the most frequent disorder can lead to major depression. Some of the common risk factors of puerperal complications are first birth, previous psychotic puerperal episodes, inherited serious psychiatric disturbances, and caesarean section^[15]. There were 3 cases of puerperal blue in the present study that were primipara and had a difficult labor. The patients improved within a few days, which was similar to the findings observed in the study by Akhter T^[5].

Limitations of the Study

The study was conducted in a single hospital with small sample size. So, the results may not represent the whole community.

V. Conclusion

Early puerperal complications are an often-ignored part of the medical world that requires detailed study. The present study found a high correlation of puerperal complications with poor socio-economic status and lack of proper antenatal care. Wound infection and UTI were the most common complications faced after emergency CS. Obstructed labor and prolonged labor were two high-risk factors for puerperal complications. The long-term sequelae of early puerperal infections morbidities should not be neglected as this may interfere with the quality of a woman by infertilities, ectopic pregnancy, chronic pelvic pain, dyspareunia, etc.

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