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Original Article

Observation of Puerperal Condition among The Patients

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ABSTRACT

Introduction: *Puerperal condition refers to the physical and emotional state of a woman during the postpartum period, which typically lasts six weeks after giving birth. It is common for women to experience a variety of symptoms during this time, including fatigue, pain, bleeding, and hormonal changes.* ***Aim of the study:*** *The aim of the study was to observe the puerperal conditions among patients admitted at the Enam Medical College Hospital.* ***Methods & Materials:*** *This cross-sectional observational study was conducted at the Department of Obstetrics and Gynecology, Enam Medical College Hospital, Dhaka, Bangladesh. The study duration was 6 months, from January 2022 to July 2022. During this period, a total of 60 patients who had given birth in the study place were included in the study.* ***Results:*** *The study involved 60 participants, and 40% of the participants had been pregnant for 35-37 weeks, and 66.66% of them had a history of cesarean section. Lower abdominal pain was the most common complaint at 40%.Mean pulse, systolic and diastolic BP were above the normal range, and 66.67% of the participants had tenderness at the suture area. The mean weight of the neonates was 2.749 ± 0.497 kg, with 36.67% having low birth weight.* ***Conclusion:*** *Most participants were young, many had a cesarean section and comorbidities. Post-delivery variables were above the normal range and many participants had tenderness as a post-delivery complication. The study highlights the need for appropriate care during the postpartum period.*

Keywords: *Puerperal, Pregnancy, Complication, Symptoms*

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INTRODUCTION

The puerperal period, also known as the postpartum period, refers to the time following childbirth when a woman's body is in the process of returning to its non-pregnant state [1-4]. It is a critical time for both the physical and emotional well-being of the mother and newborn, and it is important for healthcare providers to carefully observe and monitor the puerperal condition of their patients in order to identify and treat any potential problems or complications that may arise [5-6]. According to the World Health Organization (WHO), the global incidence rate of complications during the puerperal period is estimated to be around 9% [7-9].However, this rate varies significantly by region, with the highest rates occurring in low-income countries. In Bangladesh, for example, the incidence rate of puerperal complications is estimated to be around 18% [10]. The primary causes of puerperal complications include obstetric trauma, infections, and hemorrhage [11]. Other factors that may increase the risk of complications include malnutrition, inadequate prenatal care, and lack of access to skilled healthcare professionals [11]. Different causes of adverse puerperal conditions can have different effects on women. For example, Obstetric trauma like injuries sustained during childbirth, such as tears or cuts to the perineum, uterine rupture, or damage to the pelvic floor muscles can cause pain, bleeding, and difficulty with urination or bowel movements. Puerperal infections, including uterine infections, breast infections, and urinary tract infections, can cause fever, chills, pain, and discharge. If left untreated, these infections can have serious consequences for both the mother and baby. Postpartum hemorrhage, which is excessive bleeding after delivery, can be caused by a variety of factors, including uterine atony (failure of the uterus to contract properly), retained placental fragments, and uterine ruptures. Hemorrhage can lead to shock and organ damage if not treated promptly. Poor nutrition during pregnancy can also increase the risk of complications during the puerperal period, causing anemia and other complications. Lack of access to proper antenatal care and skilled health professionals can put a woman at an increased risk of complications such as preterm delivery, low-birth weight, sepsis, complications during cesarean section, etc. Adverse puerperal conditions have a significant effect on maternal mortality and morbidity. With regard to global maternal mortality, approximately one-quarter of deaths occur in the antenatal and one-quarter in the perinatal period, while almost half occur in the puerperium and thereafter [12-13]. Proper management and treatment of puerperal complications are essential in order to prevent serious consequences for both the mother and baby. This may include medications to control bleeding or manage infection, as well as proper nutrition and emotional support. It is also important for healthcare providers to educate puerperal patients on how to care for themselves and their newborns during this time and to encourage breastfeeding as it has numerous benefits for both the mother and baby. The present study was conducted to observe the puerperal conditions of women admitted to the study hospital.

OBJECTIVE

General Objectives

- To observe the puerperal complications of patients
- To observe the puerperal mortality and morbidity rate of the patients

METHODS & MATERIALS

This cross-sectional observational study was conducted at the Department of Obstetrics and Gynecology, Enam Medical College Hospital, Dhaka, Bangladesh. The study duration was 6 months, from January to July 2022. During this period, a total of 60 patients who had given birth in the study place were included in the study following the inclusion and exclusion criteria. Patients were included only after informed consent was obtained from the patients or their legal guardians. Ethical approval regarding the study was also obtained from the ethical review committee of the study hospital.

Inclusion Criteria

- Delivered during the study period
- Both normal deliveries and cesarean deliveries
- Patients who had given consent to participate in the study.

Exclusion Criteria

- Unable to answer the criteria question.
- Exclude those affected with other chronic diseases.

RESULTS

Among the 30 participants of the present study, the mean age was 26.50 years, with a standard deviation of 5.036 years. The age of the participants ranged from 18-39 years, and the majority

Table I: Age distribution of the participants (n=60)

Age Range	n	%
<=20	4	6.67%
21-30	40	66.67%
31-40	16	26.67%
Mean Age	26.50 ± 5.036	
Age Range	18-39	

(66.67%) had been between the age range of 21-30 years (Table I).

Table II: Distribution of participants by duration of pregnancy (n=60)

Duration of Pregnancy	n	%
≤34 weeks	8	13.33%
35-37 weeks	24	40.00%
>37 weeks	28	46.67%

46.67% of the participants had been pregnant for full term (>37 weeks), while 40% had been pregnant for 35-37 weeks, and the remaining 13.33% of the participants had been pregnant for 34 weeks or less (Table II).

Table III: Distribution of participants by clinical complaints (n=60)

Clinical Complaints	N	%
None	8	13.33%
Lower Abdominal pain	24	40.00%
Per Vaginal Discharge	12	20.00%
Less Fetal Movement	12	20.00%
Labor pain	20	33.33%
History of Cesarean Section	40	66.66%
Premature rupture of membrane	10	16.66%
Back Pain	2	3.33%

Table III shows that among the present participants, there were eight participants (13.33%) who reported no clinical complaints. A significant proportion of the participants (66.66%) have a history of cesarean section. Additionally, many participants reported multiple clinical complaints; with the most common being lower abdominal pain (40.00%) and labor pain (33.33%). The low incidence of back pain (3.33%), premature rupture of membranes (16.66%) and per vaginal discharge 20.00%.

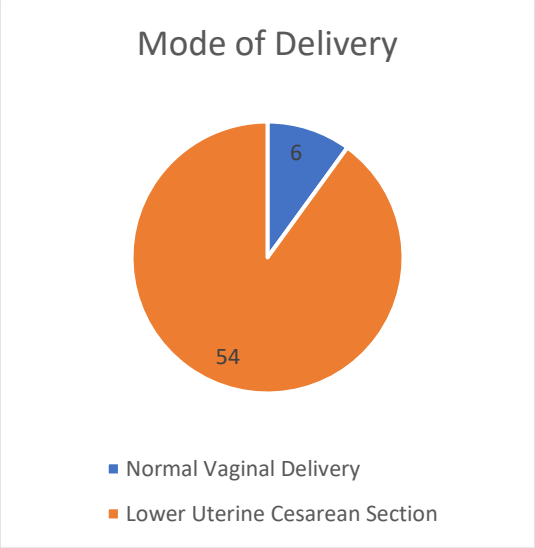


Figure 1: Distribution of participants by method of delivery (n=60)

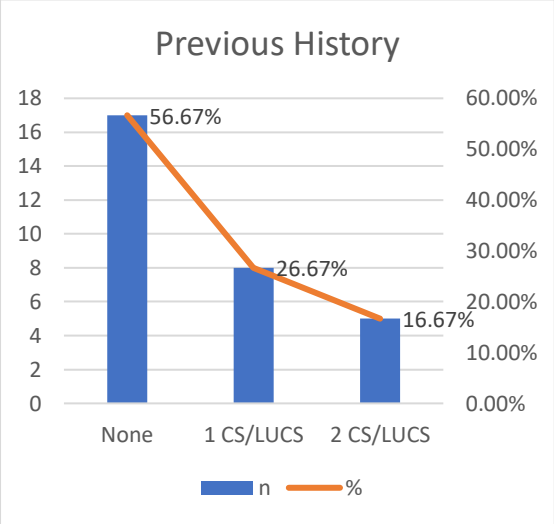
Only 10% of the participants had normal vaginal delivery, while the remaining 90% had lower uterine cesarean section (Figure 1).

Table IV: Distribution of participants by observable comorbidities (n=60)

Comorbidities	**N**	**%**
Absent	20	33.33%
Anemia	14	23.33%
Gestational Diabetes	16	26.67%
Gestational Hypertension	6	10.00%
Diabetes	12	20.00%
Hypothyroidism	12	20.00%
Immune thrombocytopenic purpura (ITP)	2	3.33%

Comorbidities were absent for 33.33% of the participants, while 26.67% had gestational diabetes, 23.33% had anemia,

20% had diabetes, another 20% had hypothyroidism, 10% had gestational hypertension, and 3.33% had ITP (Table IV).



igure 2: Distribution of participants by history of previous cesarean section (n=60)

26.67% of participants had a history of 1 CS, and 16.67% had a previous history of 2 CS (Figure 2).

Table V: Mean ± SD post-delivery variables of participants (n=30)

Variables	Mean ± SD	Range	Normal Range
Pulse (B/M)	91.66 ± 14.306	75-140	78-82
Systolic BP (mm hg)	122.14 ± 16.411	100-180	<120
Diastolic BP (mm hg)	81.43 ± 9.705	70-110	<80
Respiratory Rate per minutes	17.34 ± 1.932	14-20	12-16

Table V shows that the mean pulse was 91.66 ± 14.306 beats per minute, which was above the normal range. Mean systolic and diastolic BP were both above the normal range by a slight margin, and the mean respiratory rate was 17.34 per minute, which was also slightly above the normal range of 12-16 per minute.

Table VI: Distribution of participants by Puerperal complications (n=60)

Puerperal Complications	N	%
Tenderness	40	66.67%
Excessive Bleeding	10	16.67%
Fever	4	6.67%
Breast Complications	6	10%
Discharge From the wound	2	3.33%
No Complications	18	30.00%

30% of the participants had no complications, while most of the remaining participants had multiple complications. Among the observed complications, tenderness was observed in 66.67% of participants, excessive bleeding in 16.67%, breast complications in 10%, fever in 6.67%, and discharge from the wound in 3.33% of participants (Table VI).

Table VII: Distribution of participants by neonatal weight category (n=60)

Baby Weight	N	%
Low Birth Weight	22	36.67%
Normal Birth Weight	36	60.00%
Overweight	2	3.33%
Mean ± SD	2.749 ± 0.497	

The mean ± SD weight of the neonates was 2.749 ± 0.497 kg, with 36.67% having low birth weight (Table VII).

Table VIII: Distribution of participants by duration of hospital stay (n=60)

Duration of Hospital stay	n	%
≤3 days	44	73.33%
4 days	14	23.33%
5 days	2	3.33%
Mean ± SD	3.28 ± 0.528	

The mean hospital stay duration was 3.28 days, as a majority (73.33%) had stayed at the hospital for 3 days or less. 23.33% had stayed at the hospital for 4 days, and only 1 patient had a 5-day hospital stay (Table VIII).

DISCUSSION

The postpartum period, also known as the puerperium, is a crucial time for women as they recover from the physical and emotional changes that occur during pregnancy and childbirth. The objective of this study was to observe the puerperal condition of patients admitted to the Enam Medical College Hospital. A total of 60 participants were included in the study, with a mean age of 26.50 years and a standard deviation of 5.036 years. The age range of participants was 18-39 years and the majority (66.67%) were between the age range of 21-30 years [**Table-I**]. This age distribution is quite a normal finding for Bangladesh, as the majority of Bangladeshi women are married at an early age and start planning a family [14-15]. Some Bangladeshi studies had a much younger pregnant population as well [15]. The results showed that 46.67% of participants had been pregnant for the full term (>37 weeks), 40% had been pregnant for 35-37 weeks, and the remaining 13.33% had been pregnant for 34 weeks or less [**Table II**]. This distribution of pregnancy duration was similar to other studies in Bangladesh relating to pregnancy and pregnancy outcomes [16-17]. The most frequently reported clinical symptoms among the participants were lower abdominal pain (40%), labor pain (33.33%), per-vaginal discharge (20%), and decreased fetal movement (20%). These symptoms are also commonly reported by postpartum women in other studies [18-19]. Lower abdominal pain is often a common finding in late

pregnancies, but as the present study had very few late pregnancies, this high prevalence is concerning. In our study, 66.6% of the participants had a previous history of cesarean section [Table III]. This was consistent with other studies that have found that cesarean section is becoming increasingly common, and now accounts for around 30% of births in many developed countries [20-22]. The study also found that comorbidities were present in 67% of participants, with gestational diabetes (26.67%), anemia (23.33%), diabetes (20%), and hypothyroidism (20%) being the most common [Table IV]. These findings are supported by other studies which have found that women with pre-existing medical conditions such as diabetes and hypertension are at an increased risk of developing complications during pregnancy [23-24]. Additionally, 26.67% of participants had a history of 1 previous cesarean section, and 16.67% had a history of 2 previous cesarean sections. This is in line with research that shows that women who have had previous cesarean sections are more likely to have repeat cesarean sections in future pregnancies [25-26]. The post-delivery variables of participants were also assessed and found to be slightly above the normal range. The mean pulse was 91.66 ± 14.306 beats per minute, mean systolic and diastolic blood pressure were 122.14 ± 16.411 mmHg and 81.43 ± 9.705 mmHg, respectively, and the mean respiratory rate was 17.34 per minute [Table V]. These results were supported by other studies that have shown that women may experience the elevated pulse and blood pressure in the postpartum period as a result of the physiological changes that occur during pregnancy and childbirth [27-32]. Finally, the study found that % of participants had no puerperal complications, while the remaining had presence of multiple complications. Among the observed complications, tenderness had the highest prevalence at 66.67%, followed by excessive bleeding at 16.67%. This incident rate was not low and was in line with other studies that have found that postpartum women are at risk of developing complications such as infection, bleeding, and thromboembolic events [32]. However, the incidence rate of the present study was still low compared to other older studies [33].

Limitations of the Study

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

CONCLUSION

The present study observed that the majority of participants were of a young age, with a high incidence of cesarean section and comorbidities present in a significant number of the participants. The study also found that post-delivery variables were slightly above the normal range and a significant number of participants had tenderness as a puerperal complication. Overall, the findings of the study support the importance of providing appropriate care and support for women during the postpartum period.

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Conflict of interest: None declared

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

RECOMMENDATION

A more detailed study needs to be conducted with a larger sample size and a wider demographic, alongside long-term follow-ups to better understand the puerperal conditions of pregnant women in Bangladesh

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