

# Type, Complications and Treatment of Abortion in a Tertiary Hospital

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## Abstract

**Background:** Abortion remains a critical public health issue, particularly in low-resource settings like Bangladesh, where access to safe abortion services is often restricted. This study aimed to analyze the types of abortions, treatment methods, and post-abortion complications in a tertiary hospital in Bangladesh. **Methods:** A cross-sectional study was conducted from January to December 2017, including 100 cases of abortion at a 250-bed district hospital in Joypurhat, Bangladesh. Data were collected from patient records, focusing on demographic characteristics, type and nature of abortion, treatment methods, and complications. Descriptive statistics were used for analysis. **Results:** The majority of patients (42%) were aged 26–30 years, and 58% were primigravida. Most abortions (75%) occurred before 13 weeks of gestation, with incomplete abortions accounting for 86% of cases. Spontaneous abortions constituted 86%, and D&C was the primary treatment method in 83% of cases. Post-abortion complications were infrequent, with incomplete D&C (8%), shock (6%), and septicemia (3%) being the most common. **Conclusion:** Incomplete abortions and spontaneous abortions are the most common types observed, with D&C being the predominant treatment method. Although complications were low, the findings underscore the need for better access to safe abortion methods, including medical abortion, and the reduction of unsafe practices through improved healthcare education and policy reform.

**Keywords:** Abortion, incomplete abortion, post-abortion complications, dilatation and curettage, medical abortion, Bangladesh, maternal health.

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## INTRODUCTION

Abortion is defined as the interruption of pregnancy before the age of viability, typically before 28 weeks of gestation, with or without the expulsion of the products of conception. Approximately 75% of abortions occur before the 16th week of pregnancy, and of these, about 75% take place before the 8th week of gestation [1]. Globally, abortion is a significant public health and demographic issue, with around 19 million unsafe abortions performed each year. Complications arising from abortion are one of the five leading causes of maternal mortality, accounting for 13% of all maternal deaths worldwide [2]. In Bangladesh, the issue of abortion is particularly pressing, as complications from abortion contribute to nearly half of all hospital admissions for women [3]. Despite this, the country continues to be governed by the Penal Code of 1860, which criminalizes induced abortion unless the life of the woman is in danger [4]. Efforts to legalize abortion during the first trimester were made in 1976 through the

Bangladesh National Population Policy, but these attempts were unsuccessful [5]. Today, complications from induced abortion account for approximately one-quarter of maternal deaths in Bangladesh. It is estimated that 800,000 abortions are performed annually in the country, resulting in at least 8,000 abortion-related deaths each year [6]. Since 1979, menstrual regulation (MR) has been promoted as a legally permissible alternative to induced abortion, as it is considered acceptable before pregnancy can be confirmed. In 2012, Bangladesh legalized the use of mifepristone and misoprostol for medical abortion [7]. However, despite the availability of safer fertility control methods, illegal abortions continue to be widespread. According to the Guttmacher Institute, illegal abortion remains prevalent in rural districts such as Matlab [8]. Globally, abortion rates and maternal deaths vary. For example, the United Nations estimated that in 2000, the abortion rate was 4 per 1,000 women aged 15-44 [9]. In Nigeria, an estimated 456,000 unsafe abortions are performed each year, accounting for 40% of maternal deaths, making

abortion the second leading cause of maternal mortality in the country [10]. In the United States, about 3 out of 10 women will have an abortion by the time they are 45 years old.

## METHODS

This cross-sectional study was conducted in the Department of Obstetrics and Gynecology at a 250-bed District Hospital in Joypurhat, Bangladesh, over a 12-month period from January to December 2017. The study included 100 cases of abortion, aiming to identify the most common types of abortion encountered in the hospital, the treatments provided, and the associated post-abortion complications. Participants were selected consecutively based on specific inclusion criteria, including women admitted to the hospital with a diagnosis of abortion. Data were collected from patient

medical records and supplemented by direct interviews when necessary. Information gathered included demographic details, the type of abortion (spontaneous or induced), gestational age at the time of abortion, and any prior medical history. Treatment modalities provided to the patients were recorded, including both medical and surgical interventions. Post-abortion complications such as hemorrhage, infection, and retained products of conception were also documented. Statistical analysis was performed to evaluate the prevalence of different types of abortion, the treatments administered, and the frequency and nature of complications. Ethical approval for the study was obtained from the hospital's ethics committee, and informed consent was obtained from all participants.

## RESULTS

**Table 1: Distribution of patients according to age (n=100)**

Age group	Number	Percentage
15-20	11	11
21-25	33	33
26-30	42	42
31-35	10	10
>35	4	4

The study included 100 cases of abortion, with the highest number of patients (42%) in the 26–30 age group, followed by 33% in the 21–25 age group.

Adolescents aged 15–20 accounted for 11% of the cases, while patients aged 31–35 and those over 35 years made up 10% and 4% of the cases, respectively.

**Table 2: Distribution of patients according to parity (n=100)**

Parity	Number	Percentage
Primigravida	58	58
Multigravida	42	42

In terms of parity, the majority of patients (58%) were primigravida, while 42% were multigravida.

**Table 3: Distribution of patients according to the duration of pregnancy (n=100)**

Duration in Weeks	Number	Percentage
<13 weeks	75	75
13-28 weeks	25	25

Regarding the gestational age at the time of abortion, most cases (75%) occurred in pregnancies less than 13 weeks, with only 25% of abortions taking place between 13 and 28 weeks of gestation.

**Table 4: Distribution of patients according to the type of abortion (n=100)**

Abortion Type	Number	Percentage
Incomplete	86	86
Complete	1	1
Missed	10	10
Septic	2	2
Inevitable	1	1

In terms of abortion type, incomplete abortions were predominant, occurring in 86% of cases, while missed abortions constituted 10%. Septic, inevitable, and complete abortions were less common, each accounting for 2% or fewer of cases.

**Table 5: Distribution of pt according to nature of abortion (n=100)**

Abortion Nature	Number	Percentage
Spontaneous	86	86
Induced	24	24

Regarding the nature of abortion, 86% were spontaneous, while 24% were induced.

**Table 6: Distribution of patients according to mode of treatment (n=100)**

Treatment Method	Number	Percentage
Surgical (D&C)	83	83
Medical	17	17

In terms of treatment, surgical intervention via dilatation and curettage (D&C) was used in 83% of cases, whereas medical management was administered in 17% of cases.

**Table 7: Distribution of patients according to complications (n=100)**

Complications	Number	Percentage
Shock	6	6
Septicemia	3	3
Incomplete D&C	8	8
No Complications	83	83

In terms of complications, 83% of patients experienced no post-abortion complications. Among those with complications, 6% experienced shock, 3% developed septicemia, and 8% had incomplete D&C procedures requiring further intervention.

## DISCUSSION

This study provides insights into the characteristics, treatment, and complications of abortion cases in a tertiary hospital in Bangladesh, reflecting both regional trends and global patterns in abortion care. The majority of patients were young, with 42% aged 26–30 and 33% aged 21–25. These findings align with global trends, where younger women, particularly those in their 20s, represent a significant proportion of abortion cases. For instance, a study in Botswana similarly found a mean patient age of 27 years, emphasizing the predominance of abortion cases among younger women in both developing and developed countries [11]. However, in contrast, a study conducted in Dr. Soetomo Hospital, Indonesia, found a higher proportion of older women (over 35 years) seeking abortion services, indicating regional differences in the demographics of abortion patients [12]. In terms of parity, this study found that 58% of cases were primigravida, which is consistent with findings from Aldy and Sihombing's study in Indonesia, where primiparous women exhibited higher rates of abortion compared to their multiparous counterparts [13]. This suggests that abortion is more frequently sought during first pregnancies in many low-resource settings, potentially due to a lack of access to family planning services and contraceptive education. The gestational age at the time of abortion is also critical in understanding abortion trends and their implications for care. In this study, 75% of abortions occurred before 13 weeks of gestation, reflecting a high prevalence of early-term abortions. This finding is consistent with global trends, as seen in a study by Hunter, where 68% of abortion cases occurred before 8 weeks of gestation [14]. Early interventions may reflect better awareness of pregnancy status, but also highlight the need for timely access to safe abortion services to reduce risks associated with delayed abortions. The type and nature of abortions observed were predominantly incomplete and spontaneous. Incomplete abortions accounted for 86% of cases, which is notably higher than the 66% reported in Botswana [11]. The high rate of incomplete abortions in Bangladesh may reflect a combination of unsafe abortion

practices and delayed access to appropriate care, exacerbated by restrictive abortion laws and social stigma. Additionally, the high rate of spontaneous abortions (86%) compared to induced abortions (24%) in this study could be influenced by the illegality of induced abortion in Bangladesh. Comparatively, Sarker *et al.*, noted a similar proportion of spontaneous abortions in a tertiary care hospital in Bangladesh, which also reported 84% spontaneous abortions [15]. The management of abortion cases in this setting was predominantly surgical, with dilatation and curettage (D&C) being the most frequently used method (83%). This finding mirrors trends seen in South African hospitals, where D&C remains the primary treatment despite the availability of alternatives such as manual vacuum aspiration (MVA) [16]. Several studies advocate for the increased use of MVA, citing its cost-effectiveness and reduced complication rates compared to D&C [16,17]. In Pakistan, Zaidi *et al.*, demonstrated that shifting to MVA from D&C significantly reduced hospital stays and costs [17]. The limited use of medical management (17%) in this study suggests a need for increased availability and promotion of medical abortion methods, particularly in early gestation cases. Mamta *et al.*, highlighted the success of medical abortion using misoprostol in Bangladesh, with a 76% success rate, indicating its potential to reduce surgical interventions [18]. Complication rates in this study were relatively low, with 83% of patients experiencing no complications post-abortion. However, incomplete D&C was the most common complication (8%), followed by shock (6%) and septicemia (3%). These findings are consistent with reports from Botswana and Nigeria, where septic shock and incomplete abortions were frequently observed in post-abortion care [11,19]. Incomplete D&C, in particular, has been highlighted in studies from Pakistan and South Africa as a major contributor to post-abortion morbidity, especially in cases where the initial procedure was performed by untrained personnel or in unsafe conditions [20,21]. Shock and septicemia remain critical concerns in post-abortion care, as evidenced by Naib *et al.*, who reported a 7.5% incidence of septic shock

among abortion patients in Pakistan, similar to the rates observed in this study [20]. This underscores the importance of timely and appropriate management of post-abortion complications to prevent severe outcomes. In conclusion, this study highlights the high incidence of incomplete and spontaneous abortions in a tertiary hospital in Bangladesh, with D&C as the predominant treatment method and relatively low rates of severe complications. However, the findings underscore the need for enhanced access to medical abortion, improved patient education, and the promotion of safer, less invasive treatment options like MVA. Furthermore, addressing the root causes of abortion complications, including unsafe practices and delays in care due to legal and social barriers, is critical for reducing maternal morbidity and mortality in Bangladesh and similar low-resource settings.

### 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

This study provides a comprehensive analysis of abortion cases in a tertiary hospital in Bangladesh, highlighting key findings on the types of abortion, treatment methods, and post-abortion complications. Incomplete and spontaneous abortions were the most prevalent, with surgical management through D&C being the primary treatment. Although the complication rate was low, incomplete D&C, shock, and septicemia remained significant concerns. These findings emphasize the need for enhanced access to safe abortion services, better patient education, and the promotion of less invasive methods such as medical abortion and manual vacuum aspiration. Addressing legal and social barriers to abortion care in Bangladesh is essential to reduce maternal morbidity and mortality associated with unsafe abortion practices.

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