Characteristics and Outcomes of Abortion Cases in a Tertiary Care Hospital

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Abstract

Abortion remains a major public health concern, particularly in low- and middle-income countries, where limited access to safe abortion services and post-abortion care contributes significantly to maternal morbidity and mortality. Unsafe and delayed abortions continue to place a substantial burden on healthcare systems and communities. A retrospective, observational study was conducted in the Department of Obstetrics & Gynaecology, Community Based Medical College, Bangladesh (CBMC,B) Hospital, Mymensingh, Bangladesh, between January and December of 2024, to assess the demographic, clinical, and outcome profiles of abortion cases managed in the hospital. Clinical records of 100 women who underwent either medical or surgical abortion were recorded in the data sheet and analyzed. Our study revealed that most of the patients were in their mid-reproductive years, with a majority being multiparous and from low socioeconomic backgrounds. Contraceptive use was low, and delayed care-seeking was common. Incomplete abortion was the most frequent clinical type. Major complications included hemorrhage, infection, and sepsis. 4% maternal mortality was observed. Fetal outcomes revealed low birth weight in 38%, preterm birth in 35%, stillbirth 20% cases and live birth was recorded in only 7% cases. Data derived from such a community based setting can guide national strategies to improve reproductive health outcomes.

Keywords: Abortion, maternal morbidity, unsafe abortion, reproductive health, post-abortion care

Introduction

Abortion remains a critical issue in global public health, deeply intertwined with reproductive rights, gender equity, and access to essential healthcare services. According to recent estimates by the World Health Organization (WHO), approximately 73 million induced abortions occur annually worldwide, with nearly 45% classified as unsafethe vast majority of which occur in low- and middle-income countries.[1] Unsafe abortions account for roughly 13% of all maternal deaths globally, and around 5 million women are hospitalized each year due to complications such as hemorrhage, sepsis, uterine perforation, or long-term reproductive damage.[2,3] These consequences place a significant burden on health systems and can result in preventable disability or death, especially in resource-constrained settings.[4] The risks associated with abortion are further amplified in countries with restrictive abortion laws. In such environments, women are more likely to resort to unsafe, clandestine procedures performed by untrained individuals or attempt self-induced abortions without medical supervision.[5] Barriers to

accessing safe services include restrictive legal frameworks, financial hardship, geographic inaccessibility, gender-based stigma, and fear of legal retaliation.[6] Additionally, collecting accurate data on abortion-related morbidity and mortality remains a challenge. Many women do not disclose their abortion history due to stigma or fear, and healthcare providers may refrain from proper documentation to avoid professional or legal consequences.[7] In the

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context of Bangladesh, abortion is legally restricted but permitted in specific situations, such as to save a life of woman or preserve her physical and mental health.[8] To address the high demand for safe pregnancy termination, the government introduced the Menstrual Regulation (MR) program in the 1970s. MR allows trained providers to regulate menstruation through medical or surgical methods within a set timeframe after a missed period.[9] While MR services are legally available and endorsed by national health policy, many women are unaware of their rights or lack access due to shortages of trained personnel, geographic barriers, or social stigma.[10] Consequently, unsafe abortion continues to be a substantial public health concern, contributing to 8–15% of maternal deaths in the country.[11] Community Based Medical College, Bangladesh (CBMC,B) Hospital, situated in Mymensingh region, is a tertiary level community based hospital that frequently manage complicated abortion cases that result from delayed or unsafe procedures, serving the need of the local semi-urban and rural communities.[12] Therefore, this institution serves critical point of care and offer an opportunity to study the most severe presentations of abortion-related complications. This study was proposed to assess the demographic profiles and clinical outcomes of abortion cases managed in the Department of Obstetrics & Gynaecology, Community Based Medical College, Bangladesh (CBMC,B) Hospital, Mymensingh, Bangladesh.

Methods

This retrospective, observational study was conducted in the Department of Obstetrics & Gynaecology of Community Based Medical College, Bangladesh (CBMC,B) Hospital, Mymensingh, Bangladesh, from January to December of 2024. A total of 100 patients who met the inclusion criteria were identified and included in the study.

Our inclusion criteria were: female patients aged 15 years or older, who underwent either a medical or surgical abortion for any indication (elective or therapeutic). Exclusion criteria were: patients having gestational trophoblastic disease or ectopic pregnancy and abortion cases with incomplete or missing medical records that could compromise the ability to extract required data.

Data was extracted from the electronic medical records of eligible participants. Data collection included a variety of key variables, such as demographic information (age, parity, and socioeconomic status), obstetric history (gestational age at the time of abortion, previous abortions, and contraceptive use), and the method of abortion (medical vs. surgical). The study also focused on several important outcomes, including complications following the abortion, such as hemorrhage, infection, and uterine perforation. Additionally, the need for follow-up care was documented, along with mental health assessments conducted post-abortion. Furthermore, fetal outcomes were recorded, including any relevant effects on the fetus following the abortion procedure.

Data was collected systematically to ensure consistency and reliability. Data was then compiled, coded and analyzed using MS-Excel sheet. Descriptive statistics were used to summarized in tabulated form, as categorical variables were presented as frequency and percentage.

This study was approved by the Ethical Review Committee of Community Based Medical College, Bangladesh (CBMC,B), Mymensingh, Bangladesh.

Results

The study included 100 women who underwent either a medical or surgical abortion for any indication (elective or therapeutic). Most of them belonged to the 26–30 years age group (45%), followed by 21–25 years (32%), 15–20 years (12%), 31–35 years (8%), and >35 years (3%). Multiparous women made up 58%, while 24% were primiparous and 18% nulliparous. The majority lived in semi-urban areas (76%), and 24% were rural residents. Most of them belonged to the below-average socioeconomic group (67%), while 30% had average income status and 3% had above average. Contraceptive use was reported by only 45%. Time from abortion onset to hospital admission was <1 day in 24%, 2–5 days in 29%, 6–10 days in 9%, >10 days in 26%, and not reported in 12% cases. History of previous abortion found in 26% cases: 24% had 1–2 prior abortions and 2.00% had 3–4 in number (Table-I). Incomplete abortion was most common (82%), followed by missed abortion (9%), while complete, septic, and inevitable abortions were 9% in total (with 3% each). Causes included: unknown (38%), genetic/fetal abnormalities (23%), maternal infection (18%), hormonal imbalance (12%), and uterine abnormalities (9%). Vaginal bleeding (63%) and abdominal pain (21%) were frequent symptoms; others included fever (7%), foul-smelling discharge (5%), and abdominal distension (4%). Cervical os was found open in 58% cases, closed in 33% and not examined in 9% cases. Operative treatment was used in 94%, including dilation and evacuation (87%). Other procedures included uterine perforation repair (4%), subtotal hysterectomy (3%), colpotomy (3%), and hysterotomy (3%). Conservative treatment was to 6 patients (6%) (Table-II). Among maternal outcomes, hemorrhage occurred in 41%, septicemia in 19%, incomplete D&C in 10% cases. Sepsis was observed in 9% cases. Blood transfusion required in 10%, while ICU admission needed for 7 patients (7%). 4% maternal mortality was observed (Table-III).

Table-I: Demographic and reproductive profiles of the patients (N=100)

Variables	Frequency	Percentage
Age group (in years)		
15–20	12	12.0
21–25	32	32.0
26–30	45	45.0
31–35	8	8.0
>35	3	3.0
Parity		
Nullipara	18	18.0
Primipara	24	24.0
Multipara	58	58.0
Residence		
Rural	24	24.0
Urban	76	76.0
Socioeconomic Status		
Below average	67	67.0
Average	30	30.0
Above average	3	3.0
Contraceptive Use		
Ever used	45	45.0
Not used	55	55.0
Time from Abortion Onset to Hospital Admission		
<1 day	24	24.0
2–5 days	29	29.0
6–10 days	9	9.0
>10 days	26	26.0
Not reported	12	12.0
Previous Abortion History		
None	74	74.0
1–2 times	24	24.0
3–4 times	2	2.0

Table-II: Clinical characteristics, causes, and management of abortion cases (N=100)

Variables	Frequency	Percentage
Type of Abortion		
Incomplete	82	82.0
Complete	3	3.0
Missed	9	9.0
Septic	3	3.0
Inevitable	3	3.0
Cause of Abortion		
Maternal Infection	18	18.0
Genetic/Fetal Abnormalities	23	23.0
Uterine Abnormalities	9	9.0
Hormonal Imbalance	12	12.0
Unknown	38	38.0
Clinical Symptoms		
Vaginal bleeding	63	63.0
Abdominal pain	21	21.0
Fever	7	7.0
Foul-smelling discharge	5	5.0
Abdominal distension	4	4.0
Cervical Assessment		
Open cervical os	58	58.0
Closed cervical os	33	33.0
Not examined	9	9.0
Mode of Treatment		
Conservative treatment	6	6.0
Operative treatment	94	94.0
Operative treatment		
Dilation & evacuation	87	87.0
Subtotal hysterectomy	3	3.0
Repair of uterine perforation	4	4.0
Colpotomy	3	3.0
Hysterotomy	3	3.0

Table-III: Maternal outcomes following abortion (N=100)

Maternal Outcome	Frequency	Percentage
Hemorrhage	41	41.0
Septicemia	19	19.0
Incomplete D&C	10	10.0
Sepsis	9	9.0
Blood transfusion required	10	10.0
Intensive Care Unit (ICU) admission	7	7.0
Mortality	4	4.0

Fetal outcomes revealed low birth weight in 38%, preterm birth in 35%, stillbirth 20% cases and live birth was recorded in only 7 cases (7%) (Table-IV).

Table-IV: Fetal outcomes associated with abortion (N=100)

Fetal Outcome	Frequency	Percentage
Live Birth	7	7.0
Stillbirth	20	20.0
Preterm Birth	35	35.0
Low Birth Weight (<2500 g)	38	38.0

Discussion

Abortion is the termination of a pregnancy before the fetus reaches viability, either spontaneously (miscarriage) or intentionally (induced), with or without medical intervention.[2] The present study evaluated the demographic, clinical, and outcome profiles of women who experienced abortion, offering insight into the associated reproductive and health-related factors. The findings reflect several important patterns regarding maternal age, parity, residence, socioeconomic status, clinical symptoms, causes, and both maternal and fetal outcomes. These findings highlight the burden of abortion-related complications and indicate correlations with healthcare-seeking behavior and access, especially in a developing country context. Most abortion cases occurred among women in their mid-reproductive years, particularly from their mid-twenties to early thirties. This aligns with global and regional studies showing that spontaneous and induced abortions are more common during peak fertility years.[13] Unintended pregnancies, often linked to poor contraceptive practices, are also higher during this period. The predominance of multiparous women may suggest that higher parity is associated with increased

abortion, possibly due to family size preferences or complications. This finding echoes previous research from South Asia and Sub-Saharan Africa.[14] Urban residence was more frequent among participants, consistent with studies showing greater health service utilization in urban settings. Women in cities generally have better access to medical facilities, awareness of reproductive health rights, and reduced stigma when seeking care. In contrast, women from rural areas often face barriers such as transportation, healthcare shortages, and social stigma, contributing to delays in receiving timely care.[15-17] The majority of participants belonged to a below-average socioeconomic group. This observation parallels studies in other low- and middle-income countries where poverty is linked to poor reproductive health.[15] Financial constraints often limit access to quality antenatal care, increase reliance on unsafe abortion methods, and delay hospital visits. Women from lower-income groups may also lack the resources to travel or afford treatment, worsening outcomes.[15,17] Contraceptive use was notably low among the participants; a trend widely observed in South Asian and African studies. The lack of contraception increases the risk of unintended pregnancies, many of which end in unsafe abortions.[17] Contributing factors include cultural taboos, misinformation about contraceptive side effects, and limited access to family planning services. Similar findings underline the importance of targeted reproductive health education and the expansion of accessible family planning resources.[15,16] The delay between the onset of abortion symptoms and hospital admission was notable, with many women presenting days after symptoms began. This delay is common in resource-limited settings and is often due to underestimating symptoms, financial issues, or sociocultural barriers.[15,17] Studies from rural regions in India and

Africa have documented similar patterns, where women delay hospital visits due to fear, lack of support, or initial reliance on traditional remedies. Such delays significantly raise the risk of infection, hemorrhage, and even maternal mortality. Incomplete abortion was the most common clinical type in this study, followed by missed and inevitable abortions. This mirrors findings from various hospital-based studies where incomplete abortions frequently arise, especially after unsafe or self-managed procedures.[17] The low occurrence of complete abortions suggests that most cases required medical or surgical intervention. These results highlight the importance of improving post-abortion care, including prompt diagnosis and appropriate treatment.[2] The most frequently identified cause of abortion was unknown, followed by suspected genetic or fetal abnormalities, infections, hormonal imbalances, and uterine anomalies. This trend is similar to previous studies where a definitive cause often goes undiagnosed due to limited access to advanced diagnostics.[18,19] In low-resource settings, chromosomal testing, infection screening, and hormonal evaluations are rarely available. Maternal infections remain a critical contributor to early pregnancy loss, with various studies noting the role of untreated infections in abortion outcomes.[15] Common clinical symptoms included vaginal bleeding and abdominal pain – consistent with the classic presentation of abortion. These symptoms are usually early warning signs prompting medical attention.[2,20] The presence of fever and foul-smelling discharge indicated possible septic abortion, a severe complication associated with unsafe practices. Similar symptom profiles have been widely reported in literature, reinforcing the clinical warning signs that should prompt urgent care.[2,20,21] Operative treatment was the predominant management method, particularly dilation and

evacuation. This finding is consistent with hospital-based studies where surgical intervention is common, especially in settings with limited access to or underuse of medical abortion. A small number of patients required more complex procedures like repair of uterine perforation, hysterectomy, or colpotomy, suggesting that severe complications were present. These patterns reflect the risks associated with unregulated or delayed abortion care.[2,20] Maternal complications such as hemorrhage, septicemia, incomplete curettage, and sepsis were prevalent. These outcomes are widely recognized as consequences of unsafe or delayed abortion management.[21-23] The need for blood transfusion and ICU care emphasizes the severity of the cases managed in this hospital setting. Studies in similar regions have identified unsafe abortion as a leading contributor to maternal morbidity and mortality, particularly where skilled medical care is not immediately accessible. The few maternal deaths observed in this study are indicative of the dangers women face when care is delayed or inadequate.[17] Fetal outcomes showed a high proportion of low birth weight and preterm births. These findings are consistent with prior research linking abortion, maternal infection, and poor prenatal care with adverse neonatal outcomes. Stillbirths were also observed, frequently resulting from placental insufficiency or severe maternal illness. Studies in high-risk pregnancies have similarly identified these fetal outcomes as consequences of systemic maternal health issues.[21-23] Improving rural healthcare, expanding reproductive education, and training providers can help reduce these risks. Facility-based data can guide policies and resource planning. Future efforts should focus on prevention, timely care, and access to safe abortion options.[17,23] Every hospital-based study has some limitations. We got small sample; hence, the results of the present study may not be representative of the whole of the country or the world at large. Being a retrospective study, it hardly could see further complications and mortality.

Conclusion

This study underscores the ongoing burden of abortion-related complications, particularly in resource-limited settings. Abortion was most common among women of reproductive age, particularly multiparous and socioeconomically disadvantaged individuals. Limited contraceptive use, delayed hospital presentation, and incomplete abortions contributed significantly to adverse outcomes. Improving access to family planning, early diagnosis, and timely intervention is crucial to reducing maternal and fetal risks. Strengthening healthcare delivery in rural areas and enhancing reproductive health awareness are key to preventing unsafe abortions. Community based study like this can inform health policy and guide targeted strategies to improve maternal healthcare and reduce preventable abortion-related morbidity and mortality.

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