

To Assess Maternal Morbidity and Mortality of Induced Abortion among Admitted Cases in Rajshahi Medical College Hospital, Rajshahi

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Abstract

Background: Abortion is pregnancy termination before the 24th week. Unsafe induced abortions, lacking proper skills or medical standards, cause 67,000 annual deaths in developing countries, according to WHO. Ensuring access to safe and legal abortion services is critical to reducing maternal mortality and safeguarding women's health globally. **Objectives:** The aim of this study was to find out maternal mortality as well as morbidity related to induce abortion for termination of unwanted pregnancy in our set up. **Methods:** A cross-sectional study was conducted on 92 patients who admitted as cases of induced abortion in Rajshahi Medical College Hospital from March' 2014 to September 2014. Those who had given informed written consent were finally enrolled in this study. Patients' details history, clinical examination investigation, and operation note were collected in a preformed data sheet. Data was presented in the form of tables and graphs. Data was presented with descriptive statistics. The level of significance of 0.05 was used for this study. **Results:** Among 92 patients were 15(16.3%) hemorrhage, 9(9.8%) hypovolemic shock, 10(10.9%) generalized peritonitis, 34(36.9%) pelvic peritonitis, 5(5.4%) perforation of uterus, 4(4.3%) cervical injury, 1(1.1%) perforation of gut, 2(2.2%) septic shock, 2(2.2%) acute renal failure, 10(10.9%) no major complication. Among 92 patients 86 (93.5%) patients were improved and discharged and 6(6.5%) patients were expired. **Conclusion:** Induced abortion is a common gynecological problem requiring hospital admission and treatment. It has serious short term and long-term complications affecting women's health and life.

Keywords: Unsafe abortion, Septic induced abortion.

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INTRODUCTION

Abortion, defined as the termination of pregnancy before the 24th week when the fetus is not considered viable, has remained a contentious and critical issue in the realm of reproductive health. The World Health Organization (WHO) characterizes induced abortion as a procedure performed under conditions lacking necessary medical skills or in environments without minimal medical standards or sometimes both [1]. Tragically, this practice, particularly in developing countries, bears a significant burden of maternal morbidity and mortality [2].

Globally, maternal mortality due to complications arising from pregnancy-related causes

remains a pressing concern. A substantial portion of these deaths, estimated at 13%, can be attributed to complications arising from induced and unsafe abortions. The WHO's startling estimate of 67,000 women dying annually in developing countries due to abortion-related complications underscores the gravity of this public health issue [3]. The complications resulting from induced abortions are varied and can be severe. These include incomplete abortions, infections, hemorrhage, and injuries to internal organs, such as puncturing or tearing of the uterus and gut. Long-term health consequences are also a concern, with chronic pain, pelvic inflammatory disease, and infertility being some of the enduring complications associated with unsafe abortions [2].

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The repercussions of unsafe abortions are not confined to developing countries alone; even in countries with comparatively more advanced healthcare systems, maternal mortality due to unsafe abortions is a matter of concern. For instance, Pakistan reports that 2-12% of maternal deaths are attributable to abortion-related complications [4]. Unplanned and unwanted pregnancies are significant public health challenges worldwide, transcending religious beliefs and fears associated with abortion procedures. Alarming, 95% of induced abortions occur in developing countries, where access to safe and legal abortion services is often limited [5]. It is worth noting that ten to fifty percent of females undergoing unsafe abortions suffer from serious complications such as intra-abdominal injuries, sepsis, hemorrhage, and the need for advanced medical and surgical interventions [6]. In countries where abortion is illegal or non-religious, these procedures are frequently conducted by untrained personnel, including lady health visitors, unskilled birth attendants, and nurses, in unsanitary conditions, leading to a high risk of complications such as hemorrhage, infection, and genital tract injuries [7].

The risk of death resulting from unsafe abortions is highest in Africa, with a rate of 1 in 150, compared to rates of 1 in 250 in Asia and 1 in 900 in Latin America and the Caribbean. In contrast, Europe boasts a notably lower rate of 1 in 1,000. The complications stemming from unsafe abortions also lead to long-term morbidity, including chronic pelvic pain, secondary infertility, ectopic pregnancies, and recurrent pregnancy loss. Moreover, severe complications like septic shock, bowel injuries, acute renal failure, and tetanus contribute significantly to maternal morbidity in developing countries [8].

One of the root causes of unsafe abortions in many developing countries, including Bangladesh, lies in restrictive abortion laws. These laws compel women to resort to highly perilous methods of self-termination or seek the services of untrained and unskilled abortionists operating in clandestine environments. Consequently, these conditions give rise to a high incidence of complications, often resulting in maternal mortality [9]. Despite the risks associated with unsafe abortions, many sexually active women in these regions do not use contraceptives, increasing the likelihood of unwanted pregnancies and subsequent induced abortions. This cycle of unintended pregnancies and their health consequences perpetuates a pressing public health issue.

In light of these circumstances, the primary aim of this study was to assess the maternal morbidity and mortality associated with induced abortions for the termination of unwanted pregnancies in our specific healthcare setting. By examining the socio-demographic profiles of women seeking such procedures, understanding provider characteristics, identifying

methods employed, and quantifying the extent of morbidity and mortality, this study contributes to our understanding of the impact of unsafe abortions on maternal health in our region. Furthermore, it underscores the urgent need for improved access to safe and legal abortion services as a means to reduce maternal morbidity and mortality associated with induced abortions [10].

AIMS AND OBJECTIVES

General Objectives

- This study was to find out maternal mortality as well as morbidity related to induce abortion for termination of unwanted pregnancy in our set up.

Specific Objectives

- To determine the methods of induced abortion.
- To assess the Maternal outcome among the patients admitted with induced abortion, in RMCH.
- To evaluate the effect of post abortion care of induced abortion.

MATERIALS AND METHOD

Study Design

This study employed a cross-sectional research design to investigate induced abortion a total of 92 cases and their associated complications. The study was conducted in the Department of Obstetrics and Gynecology at Rajshahi Medical College Hospital (RMCH), located in Rajshahi, Bangladesh. Data collection took place over a span of six months, from March 2014 to September 2014.

Inclusion Criteria

- Patients admitted to the Department of Obstetrics and Gynecology at RMCH during the study period.
- Patients who had induced abortions during the study period and suffered complications as a result.

Exclusion Criteria

- Cases of induced abortion through medication (MR).
- Cases occurring outside the defined six-month study period.

Data Collection

Data collection encompassed gathering information from diverse sources, including patients' medical histories, clinical examinations, laboratory tests, medical records, and operation notes. Over six months, 1,200 patients were admitted to RMCH's gynecological ward, consisting of 405 abortion cases (of all types) and 92 induced abortion cases. Rigorous data editing procedures ensured accuracy.

Data Analysis

Statistical analysis was performed using SPSS version 23.0. The data was presented in tables and graphs, facilitating clear visualization. Descriptive statistics summarized key findings. Bivariate analyses explored relationships between variables, applying a significance level of 0.05 to ascertain statistical significance. This approach illuminated insights into maternal morbidity and mortality linked to induced abortion cases.

Ethical Considerations

Ethical clearance was paramount throughout this study. Informed written consent was diligently obtained from all participants, respecting their autonomy and right to confidentiality. The study adhered to the principles of beneficence and non-maleficence, prioritizing the participants' well-being and minimizing harm. Additionally, ethical approval was obtained from the relevant institutional review board, ensuring

compliance with established ethical guidelines and standards for research involving human subjects. All data were handled with strict confidentiality, and no personal identifiers were disclosed to protect participants' privacy and dignity.

RESULT

In the study involving 92 patients, the results revealed that the majority of patients underwent surgical interventions, with 48.9% receiving Evacuation & Curettage (E&C) and 23.9% undergoing Laparotomy. Among the Laparotomy cases, 17.4% involved Total Abdominal Hysterectomy. In terms of patient outcomes, a significant 93.5% showed improvement and were discharged, while 6.5% unfortunately expired. These findings highlight the prevalence of specific surgical treatments and the overall patient outcomes in the study population.

Table 1: Age of the Patient [N=92]

Age Group	Number of Patients	Percentage
16-20 years	10	10.9%
21-30 years	53	57.6%
31-40 years	27	29.3%
Above 40 years	2	2.2%
Total	92	100.0%

Among the 92 patients the youngest one was 18 years of age. 10.9% patients were within 16 to 20 years. 57.6% patients were from 21 to 30 years and 29.3 %

within 31 to 40 years. Only 2.2% patients were above 40 years of age. So, maximum patients were within 21 to 30 years (57.6%).

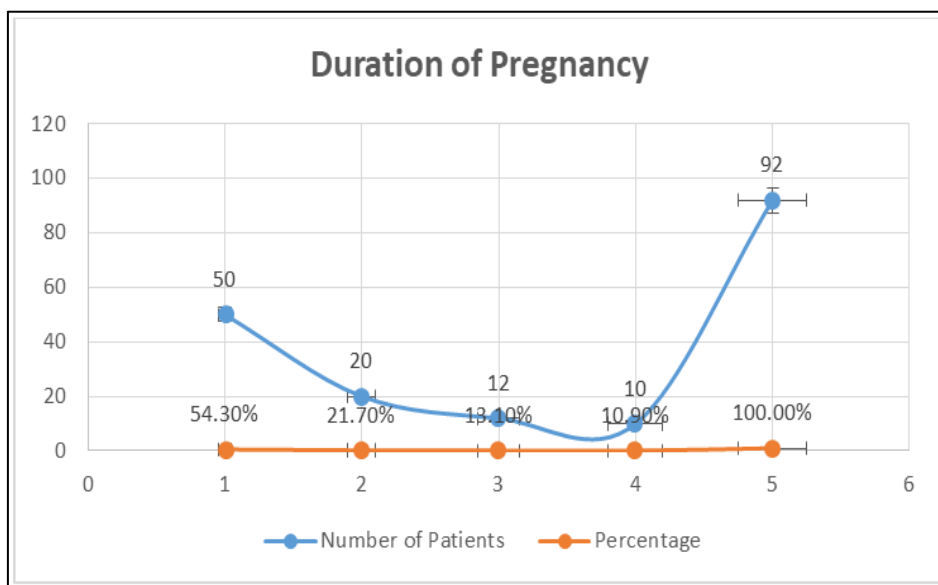


Figure 1: Duration of Pregnancy of the Patient [N=92]

This study shows that out of 92, 50(54.3%) patients were 13-16 weeks gestational period during induced abortion. 20(21.7%) patients were 8-12 weeks

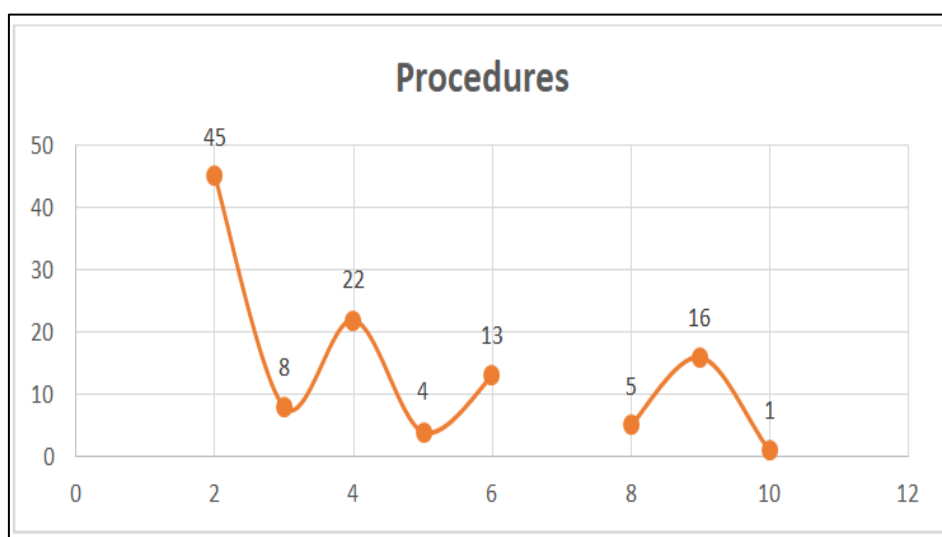
gestational period, 12 (13.1%) patients were 17-20 weeks gestational period and 10(10.9%) patients were 21-24 weeks gestational period.

Table 2: Complications of Induced Abortion [N=92]

Complication	Number of Patients	Percentage
Hemorrhage	15	16.3%
Hypovolemic Shock	9	9.8%
Generalized Peritonitis	1	1.1%
Pelvic Peritonitis	34	36.9%
Perforation of Uterus	5	5.4%
Cervical Injury	4	4.3%
Perforation of Gut	1	1.1%
Septic Shock	2	2.2%
Acute Renal Failure	2	2.2%
No Major Complication	10	10.9%
Total	92	100.0%

Among 92 patients were 15(16.3%) hemorrhage, 9(9.8%) hypovolemic shock, generalized peritonitis, 34(36.9%) pelvic peritonitis, 5(5.4%)

perforation of uterus, 4(4.3%) cervical injury, 1(1.1%) perforation of gut, 2(2.2%) septic shock, 2(2.2%) acute renal failure, 10(10.9%) no major complication.

**Figure 2: Surgical Treatment and Laparotomy Procedures [N=92]**

In the study of 92 patients, various surgical procedures were employed. The most common procedure was Evacuation & Curettage (E&C), accounting for 48.9% of cases, followed by Dilation & Curettage (D&C) at 8.7%. Laparotomy was performed in 23.9% of cases, with the majority involving Total

Abdominal Hysterectomy (17.4%). Repair of the Uterus was done in 5.4% of Laparotomy cases, while 1.1% required Total Abdominal Hysterectomy with Gut Repair. Overall, 14.1% of patients were managed conservatively. Among Laparotomy cases, 100% were categorized for specific procedures.

Table 3: Outcome of the Patients [N=92]

Outcome	Number of Patients	Percentage
Improved and Discharged	86	93.5%
Expired	6	6.5%
Total	92	100.0%

Among 92 patient 86(93.5%) patients were improved and discharged and 6(6.5%) patients were expired.

DISCUSSION

This study highlights the significant and often life-threatening complications associated with induced abortions, particularly in the context of unsafe procedures. While global abortion rates are relatively similar between developed and developing nations, the disproportionate burden of unsafe abortions is notably concentrated in the latter, comprising a substantial

percentage of induced abortion cases. These findings underscore the urgent need for comprehensive reproductive healthcare services, with a specific focus on safe abortion practices and increased access to family planning education [11].

Consistent with previous similar study reported on gynecological admissions, our study identified a

substantial number of induced abortion cases. Among 1200 gynecological patients, 405 were abortion cases, with an overall incidence rate of 33.7%. Of these abortion cases, 92 were attributed to induced abortions, constituting 22.7% of the total cases. These figures corroborate the observations, further highlighting the global prevalence of induced abortions [12].

The age distribution of patients in our study, with a majority falling within the 21-30 years age group, mirrors the findings of Adiba Malik *et al.*, suggesting a vulnerability to induced abortion complications among this demographic. Moreover, most of our patients were housewives, reflecting the socio-economic factors contributing to induced abortion incidents, comprising a significant percentage of the study population [13]. Illiteracy remains a concerning factor, with over half of the patients in our study being illiterate, consistent with the observations of Patnaik *et al.*. These findings underscore the critical need for reproductive health education, particularly among individuals with limited educational backgrounds, constituting a substantial percentage of the population [14].

The socio-economic disparities observed, including a significant number of patients from low socio-economic backgrounds and rural areas, are consistent with broader healthcare disparities in developing regions. Addressing these disparities is essential to improve access to safe abortion services, especially in economically disadvantaged and rural areas, contributing significantly to the overall burden of induced abortion cases. The complications observed, such as septic abortions, hemorrhage, and other severe health issues, underscore the gravity of induced abortion complications, comprising a substantial percentage of cases. These findings emphasize the pressing need for comprehensive post-abortion care and the significance of safe abortion services in mitigating life-threatening consequences [13].

In this study, we examined the various methods and outcomes associated with induced abortions, shedding light on the complexities and challenges faced by patients who seek these procedures. A significant percentage of patients employed different techniques to terminate their pregnancies, with oral administration of abortifacient drugs being the most prevalent method, constituting 54.4% of cases. Local application of abortifacient drugs accounted for 21.7% of induced abortions, while 19.6% of patients underwent dilatation and curettage (D&C) procedures performed by unskilled individuals. Additionally, 4.3% of patients resorted to inserting foreign bodies. These findings align with the observations underlining the diverse range of methods employed by individuals seeking induced abortions [14].

Our study highlighted the severity of complications associated with induced abortions, with 88% of patients presenting with septic abortions,

followed by 9.8% experiencing incomplete abortions. Hemorrhage was observed in 16.3% of patients, hypovolemic shock in 99.8%, generalized peritonitis in 10.9%, and pelvic peritonitis in 36.9%. Uterine perforation was found in 5.4% of cases, while cervical injuries occurred in 4.3% of patients. Furthermore, 1.1% experienced gut perforation, 2.2% septic shock, and 2.2% acute renal failure, with 10.9% exhibiting no major complications [13]. In terms of treatment, our study revealed that 85.9% of patients required surgical intervention, with 48.9% undergoing evacuation and curettage (E&C), 8.7% receiving D&C procedures, and 23.9% undergoing laparotomies. An additional 4.4% of patients underwent posterior colpotomies, while some received conservative treatments, such as uterine repair (5.4%) or total abdominal hysterectomy (17.4%). Notably, 1.1% underwent total abdominal hysterectomy with gut repair [15].

The outcomes of our study indicated that 93.5% of patients showed improvement and were discharged, while 6.5% sadly succumbed to their conditions. These findings were in line with the observations similar study emphasizing the importance of efficient medical and surgical management in healthcare facilities properly equipped and staffed to handle such cases. In some instances, intensive care management may be necessary for critically ill patients, further underscoring the severity of induced abortion complications and the importance of timely and effective medical [13].

In our study provides valuable insights into the methods, complications, and outcomes associated with induced abortions. The diverse range of methods employed and the severity of complications underscore the need for accessible and safe reproductive healthcare services, as well as comprehensive family planning education. Timely and effective medical and surgical interventions are crucial for improving patient outcomes and reducing the health risks associated with induced abortions. Efforts should focus on education, awareness, and the strengthening of healthcare infrastructure to address the complex challenges posed by induced abortions in our society.

CONCLUSION

Induced abortions, especially in cases of unsafe practices, present substantial health risks and financial burdens. To mitigate these challenges in Bangladesh, it is imperative to improve healthcare services, ensure comprehensive post-abortion care, enhance accessibility to family planning services, promote safe medical termination options, provide training for traditional abortion providers to prevent complications, and consider revising restrictive abortion laws. These measures collectively contribute to safeguarding the well-being of women and reducing the adverse impact of induced abortions on society.

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