



## Complications of Menstrual Regulation at a Tertiary Care Hospital in Dhaka City of Bangladesh: A Cross Sectional Study



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### Abstract

**Background:** Menstrual regulation is an alternate important way of reproductive life of females. **Objective:** The purpose of this present study was to find out the outcomes of complications of menstrual regulation. **Methodology:** This observational cross-sectional study was conducted on 384 unsafe MR cases were included in this study in the Department of Obstetrics and Gynecology, Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh, over the period of 12 (twelve) months, dated from January 2011 to December 2011. A data collection sheet was formed which included all the parameters and variables of interests. After selection, eligible women were informed about the study and a written consent was taken. In this observational study all women were to be interviewed, their detail history, findings of physical examination and investigation reports were checked and the information's were recorded in the data collection form. **Results:** The age of the patients ranged from 16 to 40 years and most of the patients belonged to '26 to 30 years' age group is 31.8%. The mean duration of stay was 7.32 days and the total duration ranged from 1 to 28 days. In spite of the large range of stay, more than half 53.3% of the respondents were released from the hospital within 3 days. In this study shows that the respondents were having various difficulties following abortion induction; most of them were suffering from abdominal pain was the most prevailing condition [358 (93.2%)] followed by per vaginal bleeding 90.1%. The complications of the patients developed following unsafe abortion. The most complications found Four-fifth of the cases 80.2% were found with retained product of conception. More than one-fifth were in shock 21.6% and another one-fifth were suffering from per vaginal bleeding 20.0%. **Conclusion:** Menstrual Regulation happens mostly in unsafe abortion leading to comorbidity of life even death. [Journal of National Institute of Neurosciences Bangladesh, January 2024;10(1):64-69]

**Keywords:** Menstrual regulation; abortion; complications of MR

### Introduction

Menstrual regulation (MR) is performed up to 6 weeks from the last menstrual period by trained paramedics or Family Welfare Visitor (FWV) and up to 10 weeks by physicians. About 468,000 MR procedures are performed annually in Bangladesh<sup>1</sup>. About 2.8% cases of all unwanted pregnancies are avoided through menstrual regulation. A majority of these procedures are conducted in public facilities, but under unsafe condition. Consequently, a significant number of all admissions to gynecology unit of hospitals are due to complications after such interventions<sup>2-3</sup>. Problems with menstrual

regulation Services include inadequately trained service providers, logistic support, access in rural areas and awareness in time limit of menstrual regulation has been reported<sup>4-5</sup>.

Although significant number of doctors and paramedics received formal training in menstrual regulation, and rate of complications and side effects have been reduced over time, still unsafe termination of pregnancies mostly occurs due to inadequate trained personnel and logistic support. In addition, many women do not know of a provider or are not aware of time limits and access to legal menstrual regulation services is poorer in rural

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areas than urban areas. These also contributed to the factors related to unsafe abortion and menstrual regulation causing avoidable morbidity and mortality.

In spite of the widespread availability of menstrual regulation services, utilization remains low, especially by those who need it most. There could be a number of reasons for this. Due to religious and political reasons, menstrual regulation related messages are not published. The target population is reached mostly by the word-of-mouth communication through the MCH-FP field workers, primarily the Family Welfare Assistants (FWAs). In spite of the restricted abortion law, through the delivery of menstrual regulation (MR) services, many women in Bangladesh have nevertheless enjoyed access to a way to avoid unwanted pregnancies. Unsafe termination of pregnancies continues to occur due to inadequately trained personnel and inadequate logistic support. In addition, many women do not know of a provider or are not aware of time limits. Access to legal menstrual regulation services is also poorer in rural areas than urban areas.

The Bangladesh Demographic and Health Survey of 1996/97<sup>16</sup> shows that almost four in five of all women who have ever been married know about menstrual regulation, while levels of knowledge about MR is low among currently married men. On average, 3.0% to 4.0% of women reported that they ever had undergone MR at some point. This is widely acknowledged to be a substantial underestimate. The proportion of those who have had MR is highest among married women with children and are currently in their late 20s and 30s.

In spite of the widespread availability of MR services, utilization of MR basically remains low, especially among high parity, less educated rural woman. There could be a number of reasons. Firstly, MR is not well publicized. Women learn about MR services mainly through word-of-mouth communication, through the family planning field workers, FWAs, traditional birth attendants (TBAs) and through other women. Induced abortion is restricted by law in Bangladesh which permits abortion only to save life of the pregnant woman. Despite the restrictive nature of the law, "Menstrual /Regulation" services have been available in the Government's family planning program as a public health measure to reduce high rates of hospitalization due to complications of induced abortion.

Existing information suggests that each year about 2.8% of all pregnancies undergo MR and about 1.5% undergoes induced abortion and a significant amount of these is conducted in the public facilities, but under

unsafe conditions<sup>6</sup>. A second reason for underutilization is that women are not well informed that MR is available only up to 8 weeks LMP. This is to be mentioned that MR beyond eight weeks is done by doctors in relatively larger centres at district level and thus this service is less accessible to rural women. The majority of rural women are illiterate, and do not have access to written materials. Surveys show that even those who have had MR, do not know what it is. The different languages in the country complicates communication<sup>7</sup>.

The highest proportion of abortion complications is reported when providers are FWVs, Kabiraj and self-induced. Dais, ayas, and village doctors are another group of providers for whom complications are reported. The complications of illegal abortion affect not only individual women and their families, but also medical institutions and society as a whole. Treating these complications consumes substantial quantities of scarce resources such as hospital beds, blood for transfusion, costly medicines, and the time of medical personnel which could be better utilized treating other medical conditions. Studies showed that the mean duration of a hospital stay for post-abortion care is about six nights<sup>8</sup>. The purpose of this present study was to find out the outcomes of complications of menstrual regulation.

## Methodology

**Study Settings and Population:** This observational cross-sectional study was conducted in the Department of Obstetrics and Gynecology at Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh. The study was conducted over the period of 12 (twelve) months, dated from January 2011 to December 2011. All women with history of MR admitted in the Department of Obstetrics and Gynecology at Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh were taken as study population. Women selected attended at outpatient department and admitted to Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh with complication following Menstrual Regulation. Women were excluded if they had no sign of complication following and menstrual regulation. Unwillingness to participation

**Study Procedure:** A data collection sheet was formed which included all the parameters and variables of interests. After selection, eligible women were informed about the study and a written consent was taken. In this observational study all women were to be interviewed, their detail history, findings of physical examination and investigation reports were checked and the

information's were recorded in the data collection form.

**Statistical Analysis:** Statistical analysis was performed by Windows based software named as Statistical Package for Social Science (SPSS), versions 22.0 (IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.). Continuous data were expressed as mean, standard deviation, minimum and maximum. Categorical data were summarized in terms of frequency counts and percentages. Every effort were made to obtain missing data.

**Ethical Consideration:** All procedures of the present study were carried out in accordance with the principles for human investigations (i.e., Helsinki Declaration 2013) and also with the ethical guidelines of the Institutional research ethics. Formal ethics approval was granted by the local ethics committee. Participants in the study were informed about the procedure and purpose of the study and confidentiality of information provided. All participants consented willingly to be a part of the study during the data collection periods. All data were collected anonymously and were analyzed using the coding system.

## Results

The age of the patients was ranged from 16 to 40 years. As illustrated in most of the patients belonged to 26 to 30 years' age group which was 122(31.8%) cases. The

Table 1: Distribution of the patients of their Age and symptoms of Menstrual Regulation

Age	Frequency	Percent
• ≤ 20 years	39	39
• 21 to 25 years	70	70
• 26 to 30 years	122	122
• 31 to 35 years	108	108
• Above 35 years	45	45
<b>Per vaginal bleeding</b>		
• Yes	346	346
• No	38	38
Duration of Bleeding (Days)	7.63±4.8 (2 to 18)	
<b>Abdominal pain</b>		
• Yes	358	358
• No	26	26
<b>Fever</b>		
• Yes	173	173
• No	211	211
Duration of Fever (Days)	6.2±3.99 (1 to 16)	
<b>Foul Smelling Discharge</b>		
• Yes	154	154
• No	230	230
Duration of Discharge	6.5±2.93 (1 to 10)	

respondents were having various difficulties following abortion induction; most of them were suffering from more than one condition. Out of them abdominal pain was the most prevailing condition which was 358(93.2%) cases followed by per vaginal bleeding which was 346 (90.1%) cases (Table 1).

There were several complications of the patients developed following unsafe abortion. To worsen the situation, the patients developed more than one complication at time they were admitted into the hospital. Four-fifth of the cases which was 308(80.2%) cases were found with retained product of conception. More than one-fifth were in shock which was 83(21.6%) cases and another one-fifth were suffering from per vaginal bleeding which was 77(20.0%) cases. The duration of hospital stays of the participants. The mean duration of stay was 7.32 days, modal duration was 3-day, standard deviation was 6.375 and the total duration ranged from 1 to 28 days. In spite of the large range of stay, more than half [205 (53.3%)] of the respondents were released from the hospital within 3 days of admission Mean 7.32d; Median 3.0 d; Mode 3 d; SD 6.375; Range 1-28d. Only conservative treatment was required in 38.54% cases. After initial management, Evacuation was done in 54.9% cases. Laparotomy was performed in 5.9% cases. Total number of deaths was 0.52% cases.

Table 2: Distribution of the patients by the Complications and Management of Menstrual Regulation

Complications MR	Frequency	Percent
Retained product of conception	308	80.2
Shock	83	21.6
Per vaginal bleeding	77	20.0
Anaemia	64	16.7
Perforation of uterus	8	2.08
General peritonitis	7	1.82
Gastrointestinal injury	2	0.52
Others	2	0.52
<b>Duration in Hospital Stay</b>		
≤ 3 days	205	53.3
3 to 7 days	51	13.3
1 to 2cweeks	64	16.7
<b>Management of MR</b>		
Conservative treatment	148	38.54
Evacuation after Conservative Treatment	211	54.9
Laparotomy and Other Surgical Procedure	23	5.9
Death	2	0.52

Shock=Hypovolumic, Endotoxic, Septicemic, Septic; Others=Vaginal injury, Pelvic injury

## Discussion

This study was conducted in the Department of Obstetrics and Gynecology, Shaheed Suhrawardy Medical College Hospital, Dhaka to evaluate the complications developed following menstrual regulation. The number of patients admitted in the Gynaecology unit of Shaheed Suhrawardy Medical College Hospital, Dhaka from January 2011 to December 2011 was 9535; of which 412 patients was admitted due to MR complications. A total of 384 unsafe MR cases were included in this study. The age of the patients ranged from 16 to 40 years; Mean  $\pm$  SD =  $27.53 \pm 5.715$ . Most of the patients belonged to '26 to 30 years' age group (31.8%).

Respondents were having various difficulties following abortion induction; most of them were suffering from more than one condition. Out of them abdominal pain was the most prevailing condition (93.2%) followed by per vaginal bleeding (90.1%). To worsen the situation of the patients, they developed more than one complication following unsafe abortion at time they were admitted into the hospital. Four-fifth of the cases (80.2%) were found with retained product of conception. More than one-fifth were in shock [83 (21.6%)] and another one-fifth were suffering from per vaginal bleeding (20.0%). In Shatkhirra, during admission 88% of the patients were subsequently diagnosed as incomplete MR. Only 12.0% patients were admitted due to simple and uncomplicated pervaginal bleeding. About 46.0% patients were severely anemic and needed blood transfusion. About 12% of cases presented with profound generalized sepsis. Patients admitted with irreversible shock were 6.0%. Acute abdomen with visceral injury was shown to be about 12.0%. Patient's treatment was individualized according to the merit of the case. After initial management, dilatation and curettage was done in 70.0% of cases. Laparotomy and major intraabdominal surgery was performed in 12.0% cases. Only conservative treatment was required in 12.0% cases.<sup>10</sup> In another study in Bangladesh, more than two-thirds had haemorrhage, while another two-thirds complained of lower abdominal pain. A little more than one-third had fever, and more than one-fifth developed foul-smelling discharge. Dilatation and curettage were the most common treatment given for the complications<sup>12</sup>.

Only 2 (0.52%) patients expired following unsafe abortion. The mean duration of hospital stay was 7.32 days, modal duration was 3-day, standard deviation

was 6.375 and the total duration ranged from 1 to 28 days. In spite of the large range of stay, more than half (53.3%) of the respondents were released from the hospital within 3 days of admission. Higher death was found in Shatkhirra, as total number of deaths was 6%.<sup>22</sup> Another study of 452 admitted induced abortion complication cases had mean duration of 5.4 nights for those with no surgery, 5.2 nights for those needing D & C and 11.2 nights for those who had associated surgeries<sup>13</sup>.

In this study, in spite of various sufferings and diversified complications simple conservative treatment was required in 38.54% cases and the patients were improved. This may be due to the fact that Shaheed Suhrawardy hospital has the better facilities to manage complicated and critically ill patients. After initial management, Evacuation was done in 54.9% cases. Laparotomy and other surgical procedure were performed in 5.9% cases. Those patients had iatrogenic perforation which was treated by repair of uterus and total abdominal hysterectomy accordingly. Two patients had gut injury and managed by repair of gut.

A study found from January 2009 to June 2010, a total of 773 patients were admitted in Obstetrics and Gynaecology unit of Kalaroa Health Complex, Satkhira & Sadar Hospital, Satkhira, Bangladesh. Among them 50(6.46%) patients were admitted only due to post MR complications. In contrast, abortion complication was observed in 1127(6.43%) of the total cases. The patients were selected whose age were from 15 years to 40 years with gestational period within 9 weeks from the last menstrual period. Majority of the patients belonged to age group between 20 to 40 years which was 96.0% cases. Most of the patients were multipara. Gestational age from seven weeks to nine weeks revealed 72.0%. Within seven days of MR, 60% patients were admitted; only 10% admission was beyond 15 days. Menstrual Regulation was performed in different places. Out of which largest single category was done in the private settings. 82% of cases were done in private chamber, nongovernment clinics and Meristop Clinic. Most of the patients had previous history of pregnancy termination by menstrual regulation. This group represents 70% of total patients. Clinical presentation and outcome of the post MR complicated patients were observed very carefully. During admission 88% of the patients were subsequently diagnosed as incomplete MR. Only 12% patients were admitted due to simple and



uncomplicated pervaginal bleeding. 46% patients were severely anemic and needed blood transfusion. About 12.0% of cases presented with profound generalized sepsis. Patients admitted with irreversible shock were 6%. Acute abdomen with visceral injury was shown to be about 12%. Patient's treatment was individualized according to the merit of the case. After initial management, D&C was done in 70.0% of cases. Laparotomy and major intraabdominal surgery was performed in 12.0% cases. Only conservative treatment was required in 12.0% cases. Total number of death was 6.0% cases.<sup>14</sup>

About 48 percent of the 143 women, who came to the THC, had some abortion-related complications, while the remaining 52 percent actually came for abortion services. Of those who had complications, more than two-thirds had haemorrhage, while another two-thirds complained of lower abdominal pain. A little more than one-third had fever, and more than one-fifth developed foul-smelling discharge. Dilatation and curettage was the most common treatment given for the complications. One woman who had lower abdominal pain after an induced abortion had a repeat MR as treatment. Four women were referred to a higher facility from the THC for better management of the complications<sup>15</sup>.

## Conclusions

The scenario in practice of Menstrual Regulation is not satisfactory which leading to complications even death and causing sufferings for long time. Most of the patients went conservative treatment after evacuation though some had complications like shock, per vagianl bleeding and anaemia. Therefore, safe practice of MR can reduce the morbidity and mortality.

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**Contribution to authors:** Afreen S, Begum A, Sharmin N, Rahman SH conceived and designed the study, analyzed the data, interpreted the results, and wrote up the draft manuscript. Tuhin TB, Ara I involved in the manuscript review and editing. All authors read and approved the final manuscript.

## Data Availability

Any inquiries regarding supporting data availability of this study

should be directed to the corresponding author and are available from the corresponding author on reasonable request.

## Ethics Approval and Consent to Participate

Ethical approval for the study was obtained from the Institutional Review Board. As this was a prospective study the written informed consent was obtained from all study participants. All methods were performed in accordance with the relevant guidelines and regulations.

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