

Maternal complications of menstrual regulationSP Biswas¹, B Begum², KK Bakshi³**Abstract**

This prospective observational study was done in Obstetrics and Gynecology unit in Kalaroa Health Complex, Kalaroa & Sadar Hospital, Satkhira from 1st January 2009 to 30th June 2010. The aim of it was to evaluate complications due to menstrual regulation (MR) risk factors for complications, immediate morbidities and mortality & management pattern. Total number of admission was 773, out of which only MR complications was 6.46%. Within this group, 96% patients belonged to 20 to 40 years age group, 84% were multipara. Gestational age in between 7 to 9 weeks was recorded in 72% and in 50% cases, MR was performed in private chamber. 12% patients was suffering from only pervaginal bleeding with nonfatal complications. Shock and acute abdomen due to visceral injury was 26% in which abdominal surgery was done in 12% cases. 94% patients improved after comprehensive management. Death was recorded in 6% cases. MR complications still remain an important cause of maternal morbidities and mortality in Bangladesh.

Introduction

Menstrual regulation (MR) is defined as any procedure which disrupts the intra uterine environment, so embryonic implantation either can not occur or can not be maintained.¹ Menstrual extraction was developed as a technique to help women gain and maintain control over their menstrual cycles and reproductive lives.²

This technique is also known as menstrual aspiration, menstrual extraction, menstrual interception and uterine aspiration.³ Menstrual regulation is the management for delayed menstruation either because of clinical indication or contraception. It can be done by surgical method and medical method. The surgical method of MR can be done by manual vacuum aspiration. Although induced abortion is illegal in Bangladesh, the government has made menstrual regulation available since 1975 for the prevention of unwanted pregnancies.⁴ Now it is being used in various parts of the world including developed and developing countries, with competing success rate to prevalent method of abortion. Vacuum aspiration is the technique used for conducting MR. Plastic flexible cannulae and hand pumped syringe are the equipment used for MR. It is easy to operate with. It takes only 1 to 2 minutes for the actual procedures.⁵ MR as surgical method is simple, safe and effective with 94% of cases requiring no more than routine follow up.⁶ A full-fledged operating theater is not required for MR. Indeed it can be performed in general practitioner's clinic chamber.⁷ Paramedics can provide MR services as safely as physicians can.

With all these advantages, Bangladesh has included MR as a recommended method of fertility regulation in its national program. Now it is widely popular in our country. Gynecologist, Physician, nurses and paramedics can perform MR equally, safely and effectively. About 4,68,000 MR procedure are performed annually, and its potential is not fully used.⁸

In spite of its safety and effectiveness, to some extent it is contributory to some minor and major complications. Complications are continuation of pregnancy, cervical

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laceration, prolonged bleeding, hypertension and pelvic infection. Though continuation of pregnancy is about 1% but other complications are less compared to abortion later in pregnancy.¹ Now single pregnancy test may be of great help to reduce this unwanted intervention.

Therefore whatever may be the amount of complications at the international level, we would have to consider it statistically at our national level. Complications of MR can be reduced by routine pre-procedure check up. Proper sterilization of equipment, maintaining proper asepsis procedure, routine examination of genital tract after the procedure, routine follow-up after one hour. Another important matter is to build up surgical skillness of the care provider.

The aims and objective of this study was to evaluate the complications, nature of immediate morbidities and mortality, influencing factors and outcome of management.

Materials and methods

This prospective observational study was conducted in Obstetrics and Gynecology unit in Kalaroa Health Complex, Kalaroa & Sadar Hospital, Satkhira from 1st January 2009 to 30th June 2010 for a duration of eighteen months. Patients admitted in gynae unit in Kalaroa Health Complex & Sadar Hospital, Satkhira with history of MR done by unskilled person or unhygienic condition or both during the study period was taken as sample. Exclusion criteria were medical termination of pregnancy and patients with known medical disease.

Verbal consent from the patients or legal guardian & also from ethical committee was taken prior to interview. Diagnosis was confirmed from the history and thereafter by some investigations, which were planned according to the merits of the cases. Pattern of treatment with results obtained was observed and recorded. Data was collected from the structured questionnaire. Total number of the patients admitted and the number of aborted patients were also noted from the departmental record keeping books. Systemic review of the Med Line search of different international journals was done. Finally the findings were compiled. Statistical analysis was done by using computer based

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software (Statistical package for social science) and result have been shown in different table.

Result:

From January 2009 to June 2010, a total of 773 patients were admitted in Obstetrics & Gynaecology unit of Kalaroa Health Complex, Satkhira & Sadar Hospital, Satkhira. Among them

Table I

Distribution of cases in relation to total admission

	Number	Percentage
Total Admission	773	100
Abortion	127	16.43
MR complications	50	6.46

6.46% patients was admitted only due to post MR complications, In contrast, abortion complication was observed in 16.43% 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.

Table II

Criteria based distribution

	Number (N=50)	Percentage (100%)
Age (Yrs)		
15-19	2	4
20-24	15	30
25-29	14	28
30-34	11	22
35-40	8	16
Parity		
0	8	16
1-2	21	42
>- 3	21	42
Gestational age (Weeks)		
6-7	14	28
7-8	16	32
8-9	20	40
MR admission interval (days)		
1-7	30	60
8-14	15	30
> 15	5	10

Majority of the patients belonged to age group between 20 to 40 years which was 96%. Most of the patients were multipara. Gestational age from seven weeks to nine weeks revealed 72%. Within seven days of MR, 60% patients were admitted; only 10% admission was beyond 15 days.

Table III

Places & Number of previous MR

	Number (N=50)	Percentage
Places		
Govt. Health center	9	18
Meristop clinic	6	12
Non Govt. clinic	10	20
Private cember	25	50
Number of previous MR Procedure:		
0	15	30
1	28	56
2	7	14
>=3	3	0

Table IV

Clinical Presentations during admission

Complications	Number (n=50)	Percentage (100%)
Incomplete MR	44	88
Only P/V bleeding	6	12
Anemia		
Moderate	27	54
Severe	23	46
Sepsis		
Localized	2	4
Generalized	6	12
Shock	7	14
Acute abdomen due to visceral injury	6	12

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. 12% 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% of cases. Laparotomy and major intraabdominal surgery was performed in 12% cases. Only conservative treatment was required in 12% cases. Total number of death was 6%.

Table V

Final Outcome of the admitted patients

Pattern of treatment given	Number (N=50)	Percentage (100%)
Only conservative treatment	6	12
D&C after conservative Treatment	35	70
Laparotomy and major Intra-Abdominal surgery	6	12
Death	3	6

Discussion

Every year, an estimated 80 million women have an unplanned pregnancy⁹ and 30 million abortions are performed world wide each year.¹⁰ About 10% of pregnancies in Bangladesh end in abortion, half of which are induced, and the trend in induced abortion is on increase.¹¹ Though MR is considered to be almost a harmless surgical procedure, in our study, it covers 6.46% of the total hospital admitted gynecological morbidities. In contrast with the abortion cases, which were about 16.43%, its hospital incidence is not negligible. It was stated by different authorities that doctors, nurses and paramedics can do MR but the necessity for the good training exposure and positive attitude of the medical

stuffs are also addressed with due emphasis. In Bangladesh, the existing health care delivery system and the Medical college are committed to develop a nation wide MR training and service capacity to achieve these reductions in absence of legalisation.¹² Despite the virtual presence of MR facilities in all Upazilla health center and many different Govt. hospitals and the availability of an appreciable MR training system could not reduce the undesired intervention in private setting, which is about 82% in our study. Skills, knowledge and the attitude of the performer are not always unequivocal. It is logically apparent that the load of complications is to some extent undoubtedly related with the place of interventions and the professional dexterity of the concerned medical persons. Therefore the efficacy of the training, its proper implementation and the prevalence of trained personnel at the practice level needs to be seriously readdressed.

In our study it has been exposed that the frequency of the MR is increased as the parity increases. This is due to the popularity of this procedure and an easy accessible alternate to the conventional population control method. This study also shows that the practice of MR is popular, as it is 40% in between 8 to 9 weeks of gestation (gestational age is calculated from the date of LMP). Aspiration undertaken between 42nd to 49th days from LMP gives the best result in terms of pregnancy rate and reduced complications.¹³ In another international study, it was revealed that MR is associated with low risks of continuing pregnancy (<1.0%) and other complications (2.4%) when compared to abortion later in pregnancy.¹⁴ With vacuum aspiration for artificial abortion, the lower the gestation age, the lower the rate of complication.¹⁴ Therefore the duration of pregnancy is an important factor; as it advances, it increases the complication.

Approximately 88% of the admitted patients under study were suffering from P/V bleeding in addition to some less serious complications, but the rest 12% had been suffering from grave abdominal visceral injury where comprehensive surgery was urgently contemplated. Severe anemia was detected in 46% cases and 14% patient was presented with shock. Despite all possible prompt and energetic management, the final picture of the outcome is obviously frustrating. Other than the accidental continuation of pregnancy, major complications are less revealed in some international studies. Global case fatality rate associated with unsafe abortion is some 550 times higher than the rate associated with legal induced abortion in the USA (0.6 per 100000 procedure).¹⁵ In our observation, death in 6% cases undoubtedly reflects the seriousness of the situation. Therefore death reduction can be done by training & experience.¹⁶ It can be recommended as a useful addition to present fertility control methods in family planning programmes.¹⁷ Restrictive legislation is associated with a high incidence of unsafe abortion.¹⁸

Conclusion

MR is a widely popular birth control practice in our country. It is safe, effective and economical method of fertility control. To reduce the incidence of complications, contraceptives practice should be popular and available to the community and MR Service should be used as back up service when needed.

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