THE JOURNAL OF OBSTETRICS AND GYNECOLOGY OF INDIA

The Journal of Obstetrics and Gynecology of India (July–August 2016) 66(4):239–243
DOI 10.1007/s13224-015-0673-1

ORIGINAL ARTICLE

A Study of Incomplete Abortion Following Medical Method of Abortion (MMA)

Pawde Anuya A. · Ambadkar Arun · Chauhan Anahita R.

Received: 18 December 2014 / Accepted: 7 January 2015 / Published online: 5 February 2015

About the Author

Dr. Anuya Anil Pawde DNB OBGY has obtained her MBBS training from Government Medical College, Aurangabad. She has pursued her postgraduate training of National Board of Examination at Jehangir Hospital, Pune and obtained her DNB in June 2010. Presently, she is working at Seth G S Medical College and K E M Hospital as senior registrar. She has keen interest in high-risk obstetrics and onco-surgery. She has published interesting cases in online journal, Journal of Postgraduate Obstetrics and Gynecology.

Abstract

Background Medical method of abortion (MMA) is a safe, efficient, and affordable method of abortion. However, incomplete abortion is a known side effect.

Objective To study incomplete abortion due to medication abortion and compare to spontaneous incomplete abortion and to study referral practices and prescriptions in cases of incomplete abortion following MMA.

Method Prospective observational study of 100 women with first trimester incomplete abortion, divided into two groups (spontaneous or following MMA), was administered a questionnaire which included information regarding onset of bleeding, treatment received, use of medications for abortion, its prescription, and administration. Comparison of two groups was done using Fisher exact test (SPSS 21.0 software).

Results Thirty percent of incomplete abortions were seen following MMA; possible reasons being self-administration or prescription by unregistered practitioners, lack of examination, incorrect dosage and drugs, and lack of follow-up. Complications such as collapse, blood requirement, and fever were significantly higher in these patients compared to spontaneous abortion group.

Conclusion The side effects of incomplete abortions following MMA can be avoided by the following standard guidelines. Self medication, over- the-counter use, and prescription by unregistered doctors should be discouraged and reported, and need of follow-up should be emphasized.

Keywords Medication abortion · Incomplete abortion

Pawde A. A. (✉), Senior Registrar · Ambadkar A., Resident · Chauhan A. R., Professor
Department of Obstetrics & Gynaecology, Seth G S Medical College and KEM Hospital, Parel, Mumbai 400012, India
e-mail: anuyapawde@gmail.com

Ambadkar A.
e-mail: arun17284@rediffmail.com

Chauhan A. R.
e-mail: anahitachauhan@gmail.com

Introduction

Termination of pregnancy in India is legalized under the MTP act since 1971. Earlier, surgical methods were used; however, with the introduction of various drugs, termination can also be done with medications and is legalized under the amended MTP act (2002) [1].

Medical method of abortion (MMA) or medication abortion (MA) along with manual vacuum aspiration (MVA) are the safer methods of termination of pregnancy recommended by World Health Organization over traditional dilatation and curettage [2]. Medication abortion using a combination of drugs (Mifepristone and Misoprostol) is a safe, efficient, affordable, acceptable, and approved method of MTP up to 9 weeks (63 days) of gestation [1].

Various studies have been conducted to observe the efficacy of medication abortion as well as route and dosage of medication [3]. Mifepristone is an anti-progesterone which is used orally in a dose of 200 mg, along with Misoprostol, Prostaglandin E1 400–800 μg, either orally or vaginally. The combination of mifepristone 200 mg orally followed 36–48 h later by either Misoprostol 400 μg orally or vaginally (up to 49 days or 7 weeks of gestation) or Misoprostol 800 mcg orally or vaginally (up to 63 days or 9 weeks of gestation) is approved for use under the amended MTP Act. Hence, this schedule alone should be adhered to, along with all other provisions under the Act (counseling, consent, examination, confirmation of pregnancy, prescription by a registered medical practitioner, client card) [4].

However, incomplete abortion is a known disadvantage of medication abortion reported in 0.2–3 % of cases [5, 6]. This problem is worsened when there is improper selection of patient, dosage, route, timing, or drugs used singly rather than in combination. Improper selection may be due to inadequate history regarding gestational age, lack of clinical, and ultrasound examination for gestational age as medication termination is less effective in pregnancies of 7–9 weeks and still higher chances of failure in pregnancies more than 9 weeks of gestation [7, 8]. However, there are studies which have shown that risk of incomplete abortion is minimal when used properly and medication abortion is equally effective and safe method of abortion as well [5, 9].

We studied incomplete abortions following medication and compared it to spontaneous abortions. The secondary aim of our study was to observe prescription and administration of medication by practitioners for medication termination in such women with incomplete abortion following medication. This has not been previously documented in our institute.

Aims and Objectives

Our aim was to study the incidence of incomplete abortions, either spontaneous or following medication abortion, and to compare the two groups for mode of presentation and complications. Secondary aim was to study prescription and referral practices in cases of incomplete abortion following medication abortion.

Materials and Methodology

This was a prospective observational questionnaire-based study. Study was initiated after obtaining Ethics Committee permission. Study duration was three months, and we enrolled 100 patients during this period.

Inclusion Criteria

Women admitted with first trimester bleeding per vaginum with intrauterine pregnancy less than 12 weeks confirmed by clinical examination, giving consent for the study were included.

Exclusion Criteria

Suspected/diagnosed ectopic pregnancy, patients who had undergone first trimester MTP with surgical method, and those refusing consent were excluded.

All women were administered a questionnaire which included basic and obstetric history, last menstrual period, and confirmation of pregnancy and pregnancy symptoms. Specifically, they were asked regarding onset of bleeding and other complaints such as pain, fever, shock, duration of symptoms and interval between onset and reporting to hospital, treatment received before and after admission, and use of medications, if any, for abortion. They were divided into two groups based on the use of medication.

Women with history of use of medication abortion pills were asked in details about method used: regarding source of medication, protocol followed by practitioner regarding consent, examination and investigations advised, number and schedule of medication, prescription given, and follow-up visits.

The standard management was given to both groups irrespective of whether treatment was partially taken elsewhere. After admission, relevant investigations such as blood group, hemoglobin, and ultrasound were advised. Antibiotics were given to all women. Check curettage to complete the procedure, and blood transfusion was given whenever required.

Statistical Analysis

Fisher's exact test was applied for comparison of both the groups by SPSS 21.0 software.

Observations

In our study over three months, 100 women fulfilling inclusion criteria were included. One patient who had used abortion (MA) presented with collapse and anemia was excluded from study as she had presented in second trimester. Another woman who had used MMA was excluded as it was extra-uterine pregnancy. She had received medication without examination, presented to us with bleeding per vaginum and diagnosed as ruptured ectopic pregnancy and managed surgically.

Distribution of the 100 women is shown in Fig. 1.

The observations among women with incomplete abortion following MMA are given in Tables 1 and 2. The general characteristics of both the groups are given in Table 1. Table 2 includes history of events prior to administration of MMA and the sources from whom these women obtained MMA.

As per information obtained from women, single drug (misoprostol) was used in 78.1 % women compared to double drug (mifepristone and misoprostol) in 21.9 % women. In only two women, drug was used vaginally, out of which one was combined with oral mifepristone. Out of the women who received double drug, only one woman required blood transfusion. She had received MMA at higher gestational age than recommendation (10 weeks + 2 days). In women receiving MMA, follow-up was advised in only 31.2 % ($n = 10$), and only 9.3 % ($n = 2$) women followed up with the same doctor.

We compared the women with incomplete abortion following MMA to women with spontaneous incomplete abortion. The complications are given in Table 3.

The mean gestation age in women with incomplete abortion following MMA was significantly higher as compared to spontaneous abortion and even higher than recommendation for MMA.

Requirement of blood was studied in women with incomplete abortion following MMA and was observed it to be associated with use at higher gestational age (mean gestational age 11 weeks), use of single drug rather than double and late presentation to hospital (mean duration from onset to presentation to hospital 4.5 days).

Discussion

Unsafe abortion is important and preventable cause of maternal mortality and morbidity. The legalization and liberalization of the MTP Act and use of medication abortion has lead to less frequent use of the more harmful methods of unsafe abortion such as the insertion of solid objects and use (oral or vaginal) of caustic or otherwise damaging substances (including some based on herbs and plants) and serious complications. The important change has been availability and approval of misoprostol which, when administered correctly, is highly effective [6].

Methods to make MMA safe as laid down in Comprehensive abortion care training and service guidelines include counseling, willingness for three visits, readiness for surgical method in case of failure, additional consent and MMA client card with details of the patient along with details of doctor, and place to report along with contact number in case of emergency [4]. When guidelines are followed meticulously, the failure rates are low with fewer complications.

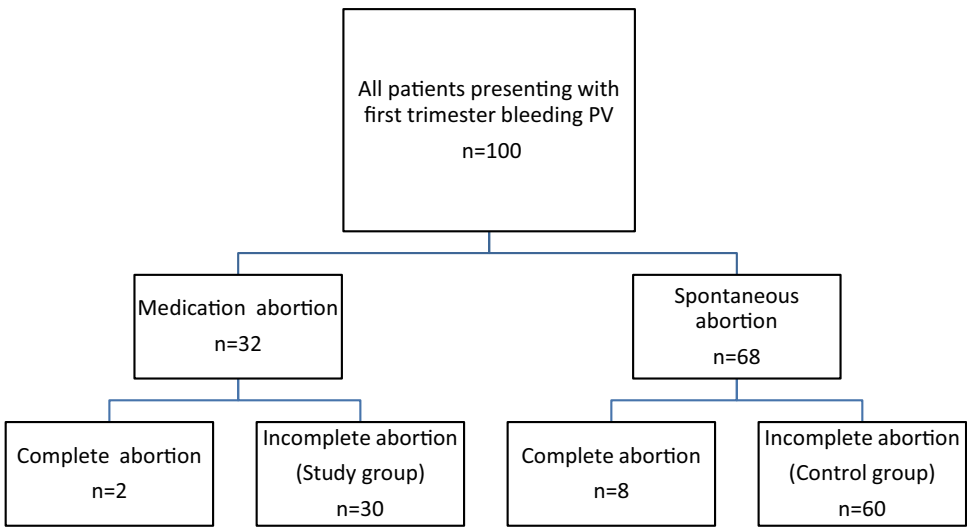

Fig. 1 Distribution of patients

Table 1 General Characteristics

	Incomplete abortion following MMA	Spontaneous incomplete abortion
Mean age (Years)	28.3	26.4
Mean gestational age (Weeks)	9 + 2	7 + 1
Onset of bleeding to presentation to the hospital (Days)	6	2

Table 2 MMA

MMA protocol as per MTP act	Number ($n = 30$)	Percentage (%)
Examination done prior to prescription	7	21.8
UPT done	25	78.2
Prescription given		15.6
MBBS	5	15.6
Other Practitioners	14	43.8
Self administered and OTC	13	40.9
Consent obtained	0	0

Table 3 Complications

Complications	Incomplete abortion following MMA N (%)	Spontaneous incomplete abortion N (%)	*P* value[†]
CC done	28 (93.3 %)	10 (33.33 %)	0.71
Fever	9 (30.0 %)	2 (6.6 %)	0.0081[†]
Collapse	17 (56.6 %)	8 (26.6 %)	0.01[†]
Blood transfusion	19 (63.3 %)	15 (25.0 %)	0.0006[†]

[†] *P* value ≤ 0.05 is statistically significant

Out of 100 women who presented to hospital with bleeding per vaginum, 32 women had used MMA for abortion. As observed, most women had done home urine pregnancy test, but only 21.8 % ($n = 7$) were examined by doctors. Majority obtained medication by themselves or over-the-counter. Inadequate knowledge about the medication and the procedure was seen among them as most have used misoprostol alone or at advanced gestational age or taken inadequate dose. Thus the use of MMA was unsupervised and unchecked.

Studies have shown that medication abortion can be used effectively and safely in developing countries like India, even in rural setup [6, 9]. However, if used improperly, medication abortion can also lead to life-threatening complications. A multi-centric report by Duggal R [10] suggests that despite of legalization of abortion, only 1/6th obtain it from registered and certified doctors. In our study, though 59 % of women obtained prescription from doctors, only 15.6 % women obtained medication from MBBS doctors (who may or may not have been registered medical practitioner i.e., RMP under the MTP act), and rest by "so- called RMP" by the patient. The basic prerequisites for MMA such as history and examination to confirm gestational age and blood group were followed by only few. Consent of the patients was not obtained by any doctor prior to administration of medicines. This indicates inadequate training of those doctors for MMA or that untrained providers are misusing MMA. Follow-up was also not advised by them to most of the women. Thus, similar to self use, improper use of MMA is likely to increase the risk of complications.

Although MMA is safe, few complications such as excessive bleeding and infection are known. Henderson reported complications following medication abortion and found that though excessive bleeding is common, severe bleeding requiring blood transfusion is low [11]. However, in our study, 63 % women required blood transfusion. As the women were unaware of the effects of the drugs, they were likely to underestimate the amount of bleeding and report to hospital late increasing the chances of collapse and requirement of blood transfusion. The reported frequency of diagnosed and/or treated infection after medical abortion is very low and varies among regimens; it is not life threatening [12]. Although fever was seen in 56.6 % ($n = 17$) of women in our study, it could have been due to use of misoprostol as signs of sepsis were absent.

A study by Bhutta has shown maternal mortality 9 % among women who presented with unsafe abortions;

however, most women presented after surgical abortion and had severe complications such as bowel injury or septicemia [13]. Conversely, the observed mortality rate is far less with medication abortion as compared to septic or surgical abortion, and this is a major advantage of MMA. There was no maternal mortality seen among our patients.

Conclusion

Accurate history and examination to confirm gestational age and to rule out contraindication for MMA is mandatory before its prescription. Incomplete abortion is a known side effect of MMA, but it can be reduced with adequate history, examination prior to MMA, and use of combination drug rather than single drug. For this, adequate training and knowledge of existing laws is a must. Over-the-counter or self use should be avoided. Doctors as well as the women opting for MMA should be well aware of the possibility of the side effect, amount of bleeding to expect and manage, and when to report back to the hospital. The need of follow-up should be emphasized to the doctors as well as to the women. Education will help women to opt for contraceptive practices and abortion services if and when required. MMA has made abortions safe and easily accessible and has reduced abortion-related morbidity and mortality; to be efficient and effective MMA should be used only by trained doctors who should follow the letter of the law. A strong stand should be taken against its rampant misuse by untrained providers, pharmacists, and patients themselves.

Compliance with ethical requirements and Conflict of interest Anuya A Pawde, Arun Ambadkar, and Anahita R Chauhan declare that they have no conflict of interest. All procedures followed were in accordance with the ethical standards of the institutional Ethics Committee (Committee for Academic Research Ethics 2011) and with the Helsinki Declaration of 1975, as revised in 2008 (5). Informed consent was obtained from all patients before being included in the study.

References

1. The medical termination of pregnancy amendment act, 2002. No. 62 of 2002, 18th December 2002.
2. World Health Organization. Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2003. 5th ed. Geneva: World Health Organization; 2007.
3. Thoai DN, Park MH, Shakur H, et al. Home-based versus clinic-based medical abortion: systematic review. Bull World Health Organ. 2011;89:360–70.
4. Comprehensive abortion care training and service delivery guideline. Ministry of Health and Family Welfare Government of India 2010.
5. Mundle S, Elul B, Anand A, et al. Increasing access to safe abortion services in rural India: experiences with medical abortion in a primary health centre. Contraception. 2007;6:66–70.
6. Coyaji K, Elul B, Krishna U, et al. Mifepristone-misoprostol abortion: a trial in rural and urban Maharashtra. India. Contraception. 2002;66:33–40.
7. Kopp Kallner H, Fiala C, Stephansson O, et al. Home self-administration of vaginal misoprostol for medical abortion at 50–63 days compared with gestation of below 50 days. Hum Reprod. 2010;25:1153–7.
8. Kahn JG, Becker BJ, MacIssac L, et al. The efficacy of medical abortion: a meta-analysis statistics. standford.edu/ckirby/techrepots/GEN/1999/1999-29.
9. Winikoff B, Sivin I, Coyaji KJ, et al. Safety, efficacy, and acceptability of medical abortion in China, Cuba, and India: a comparative trial of mifepristone-misoprostol versus surgical abortion. Am J Obstet Gynecol. 1997;176:431–7.
10. Duggal R, Barge S.: Abortion services in India: report of a multicentric inquiry. http://www.Cehat.org/aap.html (2002). Accessed 21 Feb 2012.
11. Henderson JT, Hawng AC, Harper CC, et al. Safety of mifepristone abortion in clinical use. Contraception. 2005;72:175–8.
12. Shenon C, Perry Brothers L, Philip NM, et al. Infection after medical abortion: a review of literature. Contraception. 2004;70:183–90.
13. Bhutta SZ, Aziz S, Korejo R. Surgical complications following unsafe abortion. JPMA. 2003;53:286–90.