

## Medical Method of Abortion Upto 63 Days of Gestation Using Mifepristone And Misoprostol At A Tertiary Care Centre - Its Acceptability, Efficacy And Complications.

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### Abstract

**Background:** Unsafe abortions are a major health hazard for women in the reproductive age group. 6 percent of maternal deaths in India are related to abortions. Medical method of abortion is a safe and effective method in India as per National Health Mission guidelines on comprehensive abortion care. The present study aims to study the acceptability, efficacy and safety of this method.

**Aim of the study:** To study the acceptability, efficacy and complications of medical method of abortion using mifepristone and misoprostol in the first trimester less than 63 days of gestation.

**Material and methods:** It is a prospective, observational study of 228 women seeking abortion during the period from October 2016 to September 2017. A single dose of mifepristone (200 mg) followed by vaginal misoprostol 800 micrograms 36 hours later was given. Statistical analysis was done using SPSS version 24.

**Results:** Acceptability was high in the present study with 201 cases (88.18%) being satisfied with the procedure. The number of cases in which complete abortion occurred was 207( 90.78%).118 cases (51.75%) were in gestational age of less than 49 days Most of the cases 130 (62.80%) aborted with the first dose of misoprostol within 42 hours.

**Conclusion:** Medical method of abortion is a safe, effective and acceptable method of abortion especially in early pregnancy.

**Keywords:** medical abortion, mifepristone, misoprostol, MTP Act.

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### I. Introduction

It is estimated that one third of the 205 million pregnancies that occur each year world wide are unplanned and about 20% of them end in induced abortion<sup>[1,2]</sup>. MTP services are legalized in India under the MTP Act 1971. Between 2010 and 2014, of the 55.7 million abortions that occurred 17.1 million were unsafe. This may be due to lack of accessibility to health care facility, ignorance and stigma associated with abortion according to a study published in Lancet. Advances in pregnancy testing, ultrasonography and medical and surgical techniques have accelerated the trend toward earlier abortion care, with the proportion of abortions less than 6 weeks doubling from 14% in 1992 to 29% in 2005<sup>[3]</sup>. Mifepristone- an antiprogesterone has revolutionized the management of abortion. However when used alone it could induce complete abortion in only 60-70% of women treated<sup>[4, 5]</sup>. First trimester abortions were performed by suction evacuation. Now an accepted and approved alternative to surgical abortion is medical method of abortion legalized under the amended MTP Act 2002. Women have an option of choosing a method which closely mimics the natural process of abortion.

### II. Material And Methods

**2.1 Study design** – Prospective observational study

**2.2 Study population** – Women seeking abortion attending the Out Patient department of Government General Hospital, Vijayawada.

**Study period** – October 2016 to September 2017.

**2.3 Inclusion criteria**

1. Single intrauterine pregnancy less than or equal to 63 days (9 weeks).
2. Willing to sign the consent form after counseling regarding the pros and cons of medical management and to accept surgical evacuation if bleeding is heavy or in case of failure.

**2.5 Exclusion criteria**

1. Ectopic pregnancy, organic pathology in adnexa
2. Hemoglobin less than 8 gm %
3. Age above 35 years

4. Smoking
5. Bronchial asthma
6. Medical disorders eg hypertension, seizure disorders, renal disease, liver disease, chronic adrenal disease, patient on steroid therapy, coagulopathies, and glaucoma.
7. Allergy to mifepristone, misoprostol.

The women enrolled in the study are counseled regarding the procedure according to the guidelines in the comprehensive abortion care manual. Informed consent is taken. A complete general examination is done. A transvaginal Ultrasound is performed to confirm gestational age. A visible gestational sac is and a positive pregnancy test is essential for diagnosis. Hemoglobin, blood grouping and Rh typing, random blood sugar, serum creatinine, bleeding time, clotting time, HIV, HBsAg, VDRL is done. On day 1, tab mifepristone 200 mg is given orally. Rh negative patients are given anti D 50 micrograms. She is given a client card and asked to record her symptoms and she is asked to report if she has pain or bleeding. On day 3, history of bleeding or symptoms is taken and misoprostol 400 micrograms is given vaginally. Patient is kept under observation and vitals recorded. A repeat dose of misoprostol 400 micrograms is kept if pain or bleeding does not occur in four hours. She is given analgesics and anti emetics. Excessive bleeding defined as wetting more than 2 pads in 2 hours requiring surgical evacuation or failure to abort after second dose of misoprostol is considered to be failure of medical method of abortion. True drug failure is presence of cardiac activity 2 weeks after mifepristone and misoprostol. On day 15, a clinical history regarding amount of bleeding, pain, foul smelling vaginal discharge is taken and physical examination done. Trans vaginal ultrasound is done to confirm completion of the abortion. The data was collected and the results tabulated. Statistical analysis was done using SPSS version 24.

### III. Results

**Table 1** Age wise distribution of cases

Age group	No of cases(n=228)	Percentage (%)
15-20 years	46	20.17%
20-25 years	113	49.56%
25-30 years	69	30.26%
<b>Total</b>	<b>228</b>	

The maximum number of cases belonged to the age group 20-25 years (49.56%). 46 cases (20.17%) belonged to the age group 15 -20 years. In the age group 25-30 years, 69 cases (30.26%) were seen.

**Table 2** Parity wise distribution of cases

Gravidity	No of cases	Percentage (%)
Primi	134	58.77%
Multi	94	41.22%
<b>Total</b>	<b>228</b>	

The number of primi cases was 134 (58.77%) and multi was 94(41.22%)

**Table 3** Gestational age wise distribution of cases

Gestational age	No of cases	Percentage (%)
< 49 days	118	51.75%
49-56 days	84	36.84%
56-63 days	26	11.40%
<b>Total</b>	<b>228</b>	

118 cases (51.75%) were in gestational age of less than 49 days, 84 cases (36.84%) belonged to gestational age 49-56 days and 26 cases (11.40%) between 56-63 days.

**Table 4** Induction –abortion interval

Duration in hours	No of cases(n =207)	Percentage (%)
<36 hours	6	2.89%
36-42 hours	130	62.80%
42- 48 hours	58	28.01%
> 48 hours	13	6.28%
<b>Total</b>	<b>207</b>	

6 cases (2.89%) aborted with mifepristone alone. Most of the cases aborted with the first dose of misoprostol within 42 hours. 130 cases (62.80%) aborted in 42 hours. 13 cases (6.28%) aborted after 48 hours. 21 cases were not included as medical method of abortion was not successful in these cases.

**Table 5** Complications associated with medical abortion

Complications	No of cases	Percentage (%)
Severe Bleeding	8	3.5%
Infection	2	0.87%
Failure	21	9.21%

Severe bleeding requiring blood transfusion was seen in 8 cases ((3.5%). Infection was seen in 2 (0.87%) cases and failure of medical method was seen in 21 cases [defined by requirement of surgical curettage was seen in 12 cases and continuation of pregnancy on day 15 ultrasound was seen in 9 cases].

**Table 6** Success rate according to gestational age

Gestational age	Success rate (No of cases)	Total cases	Percentage (%)
<49 days	113	118	95.5%
49-56 days	75	84	89.2%
56-63 days	19	26	73.07%
<b>Total</b>	<b>207</b>	<b>228</b>	

Success rate depends on gestational age with highest rate of success in gestational age less than 49 days (113 out of 118 cases) and lowest rate in gestational age between 56-63 days (73.07%)

**Table 7** Acceptability of medical method

Acceptability	No of cases	Percentage (%)
Satisfied with the procedure	201	88.18%
Not satisfied with the procedure	27	11.84%

Acceptability of the procedure was high with 201 cases (88.18%) responding that they were satisfied with the outcome. 27 cases (11.84%) were not satisfied as surgical method was necessary in 21 cases and in 6 cases they had severe pain and cramps though medical method was successful.

#### IV. Discussion

Mifepristone is a derivative of norethindrone. Mifepristone blocks progesterone receptors causing trophoblast separation, cervical ripening, increases release of prostaglandins and increases the sensitivity of myometrium to prostaglandin- all these actions requiring at least 18 hours [6]. Misoprostol, prostaglandin E1 analogue causes myometrial contractions and cervical ripening [7]. Scaff et al showed that highest efficacy is at gestational age less than 49 days [8] similar to the present study (95.5%). The study by Mehvish et al reported success rate of 96% [9]. Crenin et al in their study had a success rate of 96% [10]. In the study by Ashok et al [11] and Mehvish et al the percentage of abortions with mifepristone alone was 6%. The percentage of abortion with mifepristone alone in the present study was 2.89%. Medical method of abortion is highly acceptable as it mimics natural process of abortion. Duration of hospital stay can be minimized by administering mifepristone and sending the woman home according to the comprehensive abortion care (CAC) guidelines. Acceptability of medical method in studies by Bracken et al [12] and Provansal et al [13] was 92.3% and 92.9% respectively. The present study reports an acceptability rate of 88.18%.

#### V. Conclusion

Medical method of abortion is a safe and effective method of abortion especially in early pregnancy. It is an alternative choice available for women to choose over surgical method. It is highly accepted provided proper counseling is done.

#### References

- [1]. UK Multicentre Trial. The efficacy and tolerance of mifepristone and prostaglandin in the first trimester of pregnancy. Br J Obstet Gynecol 1990; 97: 480-6
- [2]. Facts on induced abortion world wide. New York: The Guttmacher Institute: 2007.
- [3]. Gamble SB, Strauss LT, Parker WY, Cook DA, Zane SB, Hamadan S. Abortion Surveillance- United States, 2005. MMWR Surveillance, 2008;56:SS-13.
- [4]. Herrmann W, Wyss R, Riondel A, et al. Effet d' un steroide anti progesterone chez la femme: interruption du cycle menstruel et de la grossesse an debut. CR Acad Sci Paris. 1982;294: 933-938.

- [5]. Kovachs L, SasM, Resch BA et al. Termination of pregnancy by RU 486-an antiprogesterone compound. *Contraception* 1984; 29:399-410.
- [6]. Satoskar RS, Bhendarker SD. *Pharmacology and pharmacotherapeutics*, Revised twenty first edition, Popular Prakashan, Bombay, 2009, 956.
- [7]. Ziemann M, Fong SK, Benowitz NL, Banskter D, Darney PD. *Obstet Gynecol.*, 1997, 90, 88-92.
- [8]. Scaff EA, Eisinger SH, Stadaluis L, Franks P, Goreand BZ, Suzanne P. Low dose mifepristone 200mg and vaginal misoprostol for abortion. *Contraception*. 1999; 19: 1-6.
- [9]. Mehvish A, Nivedita D. Medical methods of abortion using lowest effective dose of mifepristone and misoprostol: case study of 100 women. *Int J Reprod Contracept Obstet Gynecol* 2017; 6: 2753-9.
- [10]. Crenin MD, Courtney A. Mifepristone and Misoprostol administered simultaneously versus 24 hours apart. *Obstet Gynecol.* 2007; 109: 885-94.
- [11]. Ashok W, Penny GC, Flett GMM and Templeton. An effective regimen for early medical abortion: a report of 2000 consecutive cases. *Hum Reprod.* 1998; 13: 2962-65.
- [12]. Bracken H, Family planning association of India (FPAI)/Gynuity Health Projects Research Group for simplifying Medical Abortion in India. Home administration of misoprostol for early medical abortion in India. *Int J Gynecol Obstet* 2010; 108: 228-32 doi.
- [13]. Provansal M, Mimari R, Gregoire B, Agostini A, Thirion X, Gammere M. Interruption volontaire de grossesse medicamenteuse a domicile et a l hospital: etude d'efficacite et d'acceptabilite. *Gynecol Obstet Fertil* 2009; 37: 850-6 doi.

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