



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

MEDICAL METHOD OF ABORTION WITH METHOTREXATE AND MISOPROSTOL : A PROSPECTIVE STUDY

KEY WORDS: Early Mtp, Low Cost, Unsafe Abortion.

Dr Malay Sarkar	Associate Professor, Dept Of Gynae & Obs, Malda Medical College.
Dr Jaydeb Mandal*	Assistant professor, Dept of Gynae & obs, Malda Medical College *Corresponding Author
Dr Dibyendu Roy	RMO, Malda Medical College.
Dr Sunit Kumar Sarkar	RMO, Malda Medical College.

ABSTRACT

BACKGROUND : Unsafe abortions are serious health problems in poor population. They depend on quack for abortion and increases hazards.

OBJECTIVES: To see the efficacy of methotrexate- misoprostol regimen in early abortion.

METHODOLOGY: This prospective study was conducted in Malda Medical College from January 2017 to December 2018 with 89 women seeking MTP up to 7 weeks gestation. They were given intramuscular methotrexate injection 50 mg per sqm stat and tablet misoprostol 800µg vaginally on day three. If abortion did not occur after 7 days another 800µg misoprostol given vaginally.

RESULTS: 86 women (96.629%) had successful abortion within 14 days. Among them 94.18% within 72 hours. Failure rate was 3.27%. None complained of heavy blood loss.

CONCLUSION : Methotrexate-misoprostol regimen is low cost, highly efficacious and safe for early MTP.

INTRODUCTION:

Abortion is an important challenge for woman's health. Although abortion services in India were liberalized more than three decades ago. The access for the safe abortion services remains limited for the vast majority of women. Now safe abortion is the key component of most maternal health indices in our country. Despite these advances, an estimated 22 million abortions continues to be performed unsafely each year, resulting in the death of an estimated 47,000 women and disabilities for an additional 5 million women (1). Unsafe abortion is an important cause of maternal mortality in India accounting for 12% of all maternal deaths (2). The maternal mortality due to unsafe abortion is largely preventable. Here lies the importance of medical methods of abortion. The first medical method of abortion was performed with the help of mifepristone and misoprostol. This is safe effective and well accepted by women. But the cost seems to be a prohibitive factor. Medical abortion with methotrexate and misoprostol is safe effective and can be offered in a community setting (3). 80% of women attending out-patient department of Gynae and Obstetrics are of lower socioeconomic status and illiterate where cost of drugs are important constraint. To overcome this, the present study was conducted to perform the medical method of abortion at low cost with single dose of methotrexate injection followed by vaginal insertion of misoprostol tablet. So far the efficacy is concerned, it is comparable to the mifepristone and misoprostol combination with the very low cost.

MATERIAL AND METHODS:

After ethical committee permission and informed patient consent a two year prospective study was conducted in the out patient department of Malda Medical College. Total 89 women (n= 89) seeking early MTP up to 7 weeks of gestation were included in this study criteria from January 2017 to January 2018. They were randomly selected irrespective of their parity and prior caesarean section status. The pregnancy duration was confirmed by clinical examination and transvaginal ultrasonography. Haemoglobin and ABO grouping and Rh typing were done. All of them were given injection methotrexate 50 mg/ square meter of body surface area (usually 75 mg) on first day. On day three they were

provided with misoprostol tablets 800 microgram vaginally. Then they were examined and interviewed on 3rd, 5th, 7th and 15th day after misoprostol administration. An USG was performed on 10th day after misoprostol administration to exclude continuation of pregnancy and ultimately suction evacuation of uterus was restricted to on 15th day of misoprostol administration in failed cases.

EXCLUSION CRITERIA :

1. Haemoglobin percentage less than 8gm/ dl.
2. Active renal and hepatic diseases.
3. Haemorrhagic disorders.

STATISTICAL ANALYSIS:

Data was analyzed by SPSS version 11, frequency and percentage were calculated for qualitative variable, eg. Efficacy, age, parity, complications.

RESULT:

Table 1 shows Methotrexate and Misoprostol regimen was given in 89 cases. We have observed successful abortion in 86 women (96.629)%. Total number of failed cases were 3 (3.37%).

EFFICACY RATE OF THE REGIMEN:

Table 1

Total no of women studied	No of women with successful abortion	Percentage (%)
N=89	86	96.629

EFFICACY RATE OF THE REGIMEN (IN FIGURE):

Figure 1

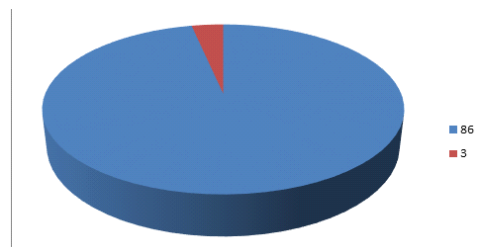


Table 2- shows the evaluation of induction and abortion interval: Total 62(72.09%)out of 86 women had successful abortion within 24 hours of Misoprostol administration. Among the rest 19(22.09%) had complete abortion within 24 hour to 72 hours. The number of women had complete abortion from 3 to 14 days of Misoprostol administration was 5 (5.81%).

INDUCTION ABORTION INTERVAL :

Table 2

Time interval	Total no of successful abortion (86)	Percentage (%)
<24 hours	62	72.093
24-72hours	19	22.093
3-14 days	5	5.813

Table 3 represents the parity profile of selected women. Eight women were nulliparus, sixty one women had one parity and fifteen women were multiparus. Among the nulliparus women four women had the past history of one caesarean section and one had previous two caesarean sections.

PARIETY PROFILE OF THE STUDY GROUP:

Table 3

Parity	No of women N=89	Percentage
1. nulliparus	08	8.988
2. Primiparus	61	68.539
3. Multiparus	20	22.471
a. Multiparus no C/S	15	75
b. Primiparus 1 C/S	4	20
c. Multiparus 2 C/S	1	5

Table 3 Among 89 women, 62 (69.66%) women had pregnancy duration 5-6 weeks from 1st day of last menstrual period and 17 (19.10%) women had more than 6 weeks but up to 7 week. Only 10 (11.235%) women had pregnancy duration less than 5 week from 1st day of last menstrual period.

Table 4 shows the average duration of bleeding per vagina in case of successful abortion. Majority women 78, out of 86 (90.69%) did not have bleeding per vagina for more than ten days. Only eight (9.3%) women had bleeding PV more than 10 days. No woman complained of heavy bleeding PV and only eight women had lowering of hemoglobin level more than 2 gm% ,but none of them required blood transfusion. There was not a single problem with the integrity of the scar of previous caesarean section in post cs pregnancy, though five women with previous caesarean sections were included in our study.

DURATION OF BLEEDING PER VAGINA IN DAYS AMONG DELETED WOMEN FOLLOWING MISOPROSTAL ADMINISTRATION:

Table -4

Duration of bleeding in days	No of women (n=86) having successful abortion	Percentage (%)
3-5	27	31.39
6-9	51	59.30
>10	08	9.30

DISCUSSION:

Methotrexate is cytotoxic to proliferative trophoblastic tissues, because of this property methotrexate has been used to treat malignant trophoblastic tissue and epithelial tumours. Methotrexate has been used safely and successfully to treat unruptured ectopic pregnancy (4,5)

Recently several authors have reported the use of Methotrexate and Misoprostal to terminate pregnancy (6,7). Creinin and Vittinghoff used Misoprostal either alone or in combination with Methotrexate up to 56 days from the 1st day

of last menstrual period (8). We have selected cases having gestational age up to 49 days or 7 weeks from the 1st day of last menstrual period . The overall success rate of medical abortion in our study is 96.629% .

One study reported 95% success rate with Methotrexate and misoprostal (9) . Richard U et al reported success rate is 96% (10). Our success rate is similar to this study.

In the present study 62 women out of 86 women (72.09%) had complete abortion within 24 hours of Misoprostol administration. Kumar S et al reported 72% incidence of complete abortion within 12 hours with the same regimen of Methotrexate and Misoprostol (11). Our study showed that 90.69% women did not have bleeding per vagina for more than 10 days . Only 8 women had fall of hemoglobin level more than 2 gm% but none of them required blood transfusion.

On informal survey of 89 women, they did not reveal any evidence of emotional distress or depression. This is similar to the study conducted by Henshaw et al that medical termination of pregnancy appears to be psychologically safe as surgical methods (12).

CONCLUSION:

The present study indicated that Methotrexate and Misoprostol regimen is a low cost, safe option of medical abortion with a very high success rate. It can be recommended in our socioeconomic condition to minimise the magnitude of maternal morbidity and mortality instead of difficult surgical abortion.

REFERENCES :

1. Unsafe Abortion: Global and regional estimates of unsafe abortion and mortality in 2008, 3rd ed, World Health Organisation, 2011.
2. Dahiya K, Madan S , Hooda R, Sangwan K, Khosla AH. Evaluation of the efficacy of mifepristone/ misoprostol and methotrexate/misoprostol for medical abortion. Indian J Med Sci. 2005 June 5 (7): 301-6
3. Borgatta L, Burnhill MS, Tyson J, Leonhardt KK, HansKnecht RU, Haskell S. Early medical abortion with methotrexate and misoprostol. Obstet Gynaecol 2001 Jn 97(1):11-6.
4. Stovall TG, Ling FW. Single dose methotrexate: an expanded clinical trial. AmJ Obstet Gynaecol 1993;168: 1759-1765.
5. Fernandez, Benifla JI, Lelaidier C, Baton C, Frydman R. Methotrexate treatment of ectopic pregnancy : 100 cases by primary transvaginal injection under sonographic control. Fertil steril 1993;59: 773-777.
6. Strohm H, Boldizar A, Feichtinger W. chemical curettage using intrauterine methotrexate injection. Hum repod 1992; 7: 1027-1028.
7. Buckshee K, Dhord AJ. A new non surgical technique for termination of intrauterine pregnancy associated with the large multiple uterine leiomyoma. IntJ Gynaecol Obstet 1992; 37:297-299.
8. Creinin MD, Vittinghoff E. Methotrexate and misoprostol Vs Mispprostol alone for early abortion: a randomised controlled trial. JAMA 1994;272:1190-1195.
9. Lamakov K, Pekhivonov B, Amaliev I . Medical abortion using methotrexate and misoprostol efficacy and tolerability. A Kush Gimelk (sofia).2005; UG(3)16-8.
10. Richard D, Hansknecht MD. Methotrexate and misoprostol to terminate early pregnancy. NEngJ Med. 1995;333:537-40.
11. Kumar S, Antony Z K, Kapur A, Togra M. Termination of pregnancy in first trimester – medical option. MJAFI 2005;61:151-154.
12. Henhaw R, Nasi S, Russel I, Templeton A. Psychological responses following medical abortion (using mifepriston and gemeprost) and sergical vacuum aspirtion: a parent centred partially randomised prospective study. Acta obstet Gynaecol Scand 1994; 73:812-818.