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Original Research Article

Combination of mifepristone and misoprostol: an effective method of medical abortion upto gestational age of 49 days

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ABSTRACT

Background: A combination of antiprogesterone mifepristone and prostaglandin analogue misoprostol provides an effective non surgical method for termination of pregnancy up to gestational age of 49 days. Objective of present study was to assess the efficacy of this medical regimen for termination of pregnancy up to 49 days of pregnancy.

Methods: A hospital based retrospective study was carried out in Department of Obstetrics and Gynecology in Sassoon General Hospital, Pune, India for a period of one year where 30 women requesting for medical abortion were studied. The medical regimen used was mifepristone 200 mg orally followed 48 hours later by misoprostol 800 microgram administered in posterior vaginal fornix.

Results: The overall success rate of this regimen was 90%. Where success was defined as achieving complete abortion without needing surgical evacuation. Surgical evacuation was needed in 3 (10%) patients i.e. for incomplete abortion.

Conclusions: Combination of oral mifepristone 200mg followed 48 hours later by vaginal misoprostol 800mcg is an effective method of medical termination of pregnancy.

Keywords: Abortion, Medical, Mifepristone, Misoprostol

INTRODUCTION

A combination of antiprogesterone mifepristone and prostaglandin analogue misoprostol provides an effective non surgical method for termination of pregnancy up to gestational age of 49 days.¹⁻³

Medical abortion may be preferred.⁴

- If it is the woman's preference as she wants to avoid a surgical intervention.⁵
- In very early gestation upto 49 days of gestation medical abortion is considered to be more effective than surgical abortion, especially when clinical

practice does not include detailed inspection of aspirated tissue.⁶

- If the woman is severely obese (BMI greater than 30) but does not have other cardiovascular risk factors, as surgical treatment may be technically more difficult.
- If the woman has uterine malformations which may make surgical abortion technically more difficult.⁷
- Unmarried woman those who don't want to reveal about pregnancy and sexual relationships.⁸

Objectives of present study were to assess the efficacy of this medical regimen for termination of pregnancy up to 49 days of pregnancy and to identify complications associated with medical abortion.

METHODS

A hospital based retrospective study was carried out in the Department of Obstetrics and Gynecology in Sassoon General Hospital, Pune, India for a period of one year where 30 women requesting for medical abortion were studied. Data was collected from hospital records.

A physical examination is done to determine eligibility for this type of medical abortion procedure. Informed written consent was taken. The medical regimen used was Tab. Mifepristone 200 mg orally followed 48 hours later by Tab. Misoprostol 800 micrograms administered in posterior vaginal fornix.⁹

Table 1: Age wise distribution of cases.

Age in year	No. of cases	Percentage
<19 year	-	-
20-29 year	20	66.66
30-39 year	10	33.33
>40 year	-	-

Table 2: Marital status.

Marital status	No. of cases	Percentage
Married	26	86.6
Unmarried	4	13.3

Patient advised to contact if there is bleeding to such an extent that more than two pads are soaked per hour for two consecutive hours. Follow up ultrasonography was done 12 days after Tab. Misoprostol to ensure that the abortion was complete and to check for any complications like haemorrhage, incomplete abortion, ongoing pregnancy.¹⁰ Most of the women were in age group of 20-29 years (>50%), and more than 50% were within 42 days of gestational age.

Exclusion criteria

- Those with
- Ectopic pregnancy
- Ovarian mass
- Allergy to any drug in the regimen
- Corticosteroid use
- Adrenal failure
- Anaemia
- Bleeding disorders
- Liver or kidney problem
- Cardio vascular disease

Table 3: Parity wise case distribution.

Parity	No. of case	Percentage
Primigravida	11	36.66
Secondgravida	11	36.66
Multigravida	8	26.66

Table 4: Gestational age wise cases.

Gestational age	No. of cases	Percentage
Upto 5 weeks	4	13.33
5 to 6weeks	12	40
6 to 7 weeks	14	46.66

RESULTS

The overall success rate of this regimen was 90%.

Table 5: Gestational age wise outcome.

Gestational age	Outcome	Success rate
Upto 5 weeks	Complete abortion	100%
5 to 6 weeks	Complete abortion	100%
6 to 7 weeks	3cases had incomplete abortion	90%

Table 6: Post regimen haemorrhage.

Drug	No. of cases	Percentage
After mifepristone	9	30
After misoprostal	21	70
Upto 7 days	27	90
Upto 2 weeks	1	3.33
More than 2 weeks	2	6.66

Where success was defined as achieving complete abortion without needing surgical evacuation. Surgical evacuation was needed in 3 (10%) patients i.e. for incomplete abortion. Surgical evacuation was needed in those patients with gestational age more than 6 weeks.

Table 7: Side effects of medical abortion.

Side effects	No. of patients	Percentage
Pain in abdomen	30	100
Nausea	10	33.33
Fever	6	20
Diarrhea	5	16.66
Vomitting	4	13.33
Headache	4	13.33

Table 8: Complications associated with medical abortion.

Complications	No. of patient	Percentage
Incomplete abortion	3	10
Blood transfusion	-	-
Pelvic infection	-	-
Ongoing pregnancy	-	-
Death	-	-

As gestational age advances, there are more chances of incomplete abortion and need of surgical evacuation. Also, all patients experienced pain in abdomen as most common side effect with few other side effects like nausea, vomiting and diarrhoea.

DISCUSSION

Combination of oral Mifepristone 200mg followed 48 hours later by vaginal Misoprostol 800mcg is an effective and safe method of medical termination of pregnancy upto 49 days of gestational age. Medical methods for first trimester abortion have been demonstrated to be both safe and effective. Regimens that combine mifepristone with a prostaglandin analogue such as misoprostol are more efficacious than a prostaglandin alone. Mifepristone, (RU 486, a substitute 19- norethisterone derivative) by blocking the progesterone receptors causes estrogen dominance and results in intrauterine fetal death. Simultaneously, it sensitizes the uterus to the activity of the prostaglandin. Thus, a combination of these two drugs is significantly more efficacious for termination of early pregnancy when compared to mifepristone given alone.

A regimen that includes mifepristone in a dosage of 200 mg administered orally, followed by misoprostol in a dosage of 800 µg vaginally administered 48 hrs after mifepristone, and is highly effective for medical abortion up to 63 days gestation.¹¹ This regimen is reported to be the best in most of the studies and moreover mifepristone serum levels do not increase proportionally with increasing oral doses.

Limitations

As sample size is very small, lesser duration of study, we cannot predict about long term complication. Repeated visits are required, bleeding is heavy and unpredictable, risk of fetal malformations if pregnancy continues.

CONCLUSION

Combination of oral Mifepristone 200mg followed 48 hours later by vaginal Misoprostol 800mcg is an effective and safe method of medical termination of pregnancy upto 49 days of gestational age with a very small risk of complications. As gestational age advances, there are more chances of incomplete abortion.

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