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# A Comparative Study of Second Trimester Termination of Pregnancy with Mifepristone and Misoprostol Vs Misoprostol Alone

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**Original Research Article**

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**Abstract:** The aim is to study the efficacy and safety of combined Mifepristone and misoprostol used in second trimester abortions (>12 and up to 20 weeks) in comparison with only vaginal misoprostol. This study was conducted in the family planning department of Government Maternity Hospital, Hyderabad.
**Keywords:** medical termination of pregnancy, ectopic pregnancy, multipara, gestational age, gravida.

## INTRODUCTION

According to MTP act 1971, medical termination of pregnancy (MTP) in India is allowed up to 20 weeks. There is no ideal method or best method for MTP between 13 and 20 weeks leading to varied complication. Second trimester abortion forms a small fraction (10% to 15%) of total induced abortion. Two third of major abortion related complications and half of abortion related mortality occur in pregnancy terminated after 13 weeks of gestation. World-wide 42 million legal abortions and 10-12 million illegal abortions take place every year of which 10-15% are performed in second trimester. In India alone, 6.7 million induced abortions occur annually of which late abortions constitute 10.7-15%.

Previously, various methods, both medical and surgical, either alone or in combination were used to perform MTP in second trimester with their respective complications. However, there is a constant search going on for an ideal method for second trimester medical termination of pregnancy.

There should be a regimen which should be characterized by a short induction abortion interval (I-A-I) devoid of any serious side effects. High acceptability, easy to perform and cost effective. Medical method in second trimester MTP is found to be effective. The objective is to investigate the effectiveness of oral Mifipristone plus vaginal Misoprostol and compare it with only vaginal Misoprostol in second trimester induced abortions (≥12 and ≤20 weeks).

### Aim and Objectives

The aim is to study the efficacy and safety of combined Mifepristone and Misoprostol use in the second trimester abortion (≥12 and ≤20 weeks) in comparison with only vaginal misoprostol.

### Objectives

To reduce the induction abortion interval with the lowest possible dose
To reduce the complication rate
To reduce the adverse reactions
To have an effective outcome

## MATERIALS AND METHODS

The clinical study was carried out in government maternity hospital attending family planning out patient in one and a half years. It is prospective, comparative, randomized clinical study.

**Sample size:** Total 100 cases were selected.

Group A- 50 women with mifepristone and misoprostol
Group B-50 women with misoprostol alone.

### Source of study

Women attending government maternity hospital in need of second trimester abortions i.e., 12 to 20 weeks of pregnancy were taken up for study. Ethical clearance obtained.

### Inclusion criteria

12 to 20 weeks of pregnancy (as per the definition of second trimester abortions by MTP Act 1971) that fulfilled indications of MTP as per guidelines of MTP act 1971.If the pregnancy would involve a risk to the life of the pregnant woman, or the

grave injury to the physical or mental health if there is a substantial risk to the child born to suffer physical or mental abnormalities, to be seriously handicapped.

Pregnancy caused by rape
Pregnancy resulting from contraceptive failure

**Exclusion criteria**
Scarred uterus
Ectopic pregnancy
Grand Multipara
Contraindications to Misprostol and Mifipristone

**Investigations**
Routine blood investigations-Hb, PCV, BT, CT
Urine analysis
Blood sugar
HIV with consent HBsAg, VDRL
Ultrasonography

**Methods**

100 cases were selected at random and divided into 50 each. All the patients were informed about the success rate of medical termination of pregnancy. After confirming the Gestational Age by ultrasound and written informed consent, medications were given for the termination of pregnancy and were followed.

Group A:50 randomly selected cases given Tablet mifepristone 200 mg orally on an empty stomach and they are allowed to go home and instructed to return to family planning ward after 48 hours where they were admitted and 400 mcg tablet misoprostol was placed vaginally under strict aseptic conditions. Then every 6$^{th}$ hourly, 200 mcg up to maximum five doses including the first dose.

Group B: 50 cases were admitted and received tablet as mentioned without prior mifepristone. Both the groups are recorded with vital signs. Success was defined as complete expulsion of product of conception within 24 hours of first dose and failure was defined as incomplete or required surgical evacuation.

**OBSERVATIONS**

Results were analyzed according to age parity, gestational age and average dose of misoprostol required and induction abortion interval.

All the women of Group A were aged between 20 and 30 years and Group B were aged between 19 and 34 years.

**Table -1: Age distribution**

| Age group | Group A | | Group B | |
|---|---|---|---|---|
| | N | % | N | % |
| <20 | - | - | 01 | 2 |
| 20-25 | 33 | 66 | 26 | 52 |
| 26-30 | 13 | 26 | 20 | 40 |
| >30 | 04 | 8 | 03 | 6 |
| Total | 50 | | 50 | |

**Table-2: Parity distribution**

| Gravida | Group A | | Group B | |
|---|---|---|---|---|
| | N | % | N | % |
| Primi | 06 | 12 | 13 | 26 |
| G2 | 19 | 38 | 20 | 40 |
| G3 | 18 | 36 | 09 | 18 |
| G4 | 07 | 14 | 08 | 16 |
| Total | 50 | | 50 | |

Above table shows that maximum women belong to 2nd gravidas

**Table-3: Gestational age distribution**

| Gestational age | Group A | | Group B | |
|---|---|---|---|---|
| | N | % | N | % |
| 12 | 07 | 14 | 01 | 2 |
| 13 | 03 | 6 | 01 | 2 |
| 14 | 07 | 14 | 08 | 16 |
| 15 | 03 | 6 | 06 | 12 |
| 16 | 11 | 22 | 10 | 20 |
| 17 | 05 | 10 | 04 | 8 |
| 18 | 07 | 14 | 05 | 10 |
| 19 | - | - | 04 | 8 |
| 20 | 07 | 14 | 11 | 22 |
| Total | 50 | | 50 | |

Most of the cases of Group A belong to 16 weeks of gestational age and Group B belongs to 20 weeks (Table-3).

In group A, one patient required surgical evacuation where as in group B, 6 patients had incomplete abortions (Table-4).

**Table-4: Outcome of abortion**

| Outcome of abortion | Group A | | Group B | |
|---|---|---|---|---|
| | N | % | N | % |
| Complete | 49 | 98 | 44 | 88 |
| Incomplete | 01 | 2 | 06 | 12 |
| Total | 50 | | 50 | |

**Table-5: Side effects among the groups**

| Types of side effects | Group A | | Group B | |
|---|---|---|---|---|
| | N | % | N | % |
| Fever | 04 | 8 | 10 | 20 |
| Nausea & Vomiting | 03 | 6 | 07 | 14 |
| Diarrhoea | 02 | 4 | 04 | 8 |
| Headache | 03 | 6 | 05 | 10 |

The side effects are less in Group A.

## DISCUSSION

The clinical study was conducted in Government Maternity Hospital. Present study includes 100 cases which were divided into 50 each. Group A were given Mifepristone and Misoprostol whereas Group B was given only Misoprostol. In the present study, most of the cases belong to the 2nd gravidas. Similar study conducted by Partha Mukhopadhyay *et al*. where similar distribution of parity in both groups were present.

In present study, the mean gestational age in both groups A and B belong to 15-17 weeks of pregnancy. Similar study done by Madhuri N *et al.* where the mean gestational age was 16.5 weeks of pregnancy. Study done by J.E. Dickinson *et al*. where the dose of misoprostol required by Group A was much lesser than the Group B for complete abortion.

Study done by Akkenapally P L with same results. In a study done by Jahagirdar SS *et al*. 12 mean age distribution was 26.77 years. Study done by Patel U *et al*. where complete abortion rate was 100% in Group A and 84% in Group B. Complication rate was less in Group A which was comparable to the study done by Akkenapally P L. Study done by J E Dickinson et al where the complication rate by 37.2% in Group A and 38% in Group B.

In a study done by Kulkarni K.K.11 mean IAI in mifepristone primed group was 8.15 hours and in misoprostol alone group it was 24 hours. In a study done by Nagaria *et al*.[7] complication rate was 5% in mifepristone primed group and 10% in misoprostol alone group. In present study, complication rate was significantly less in mifepristone primed group compared to misoprostol alone group, which was comparable to study done by Akkenapally P.L

## CONCLUSION

The combination of Mifepristone and Misoprostol is highly effective and a safe method for the second trimester termination of pregnancy.

Combination reduces induction abortion interval, dose of Misoprostol required and also have fewer side effects and less surgical and anesthetic complications. This method can be used in high density hospital since the complications are less.

## REFERENCES

1. Mukhopadhyay P, Bag TS, Kyal A, Bhuniya A, Saha TK. Second trimester abortions with vaginal misoprostol. Journal of South Asian Federations of Obstetrics and Gynecology. 2012.
2. Madhuri N, Veena GR, Manjunath GH. Randomised comparison of oral and vaginal misoprostol when combined with mifepristone for termination of second trimester pregnancy. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2016 Dec 17;5(2):509-13.
3. Dickinson JE, Brownell P, McGINNIS K, Nathan EA. Mifepristone and second trimester pregnancy termination for fetal abnormality in Western Australia: worth the effort. Australian and New Zealand Journal of Obstetrics and Gynaecology. 2010 Feb 1;50(1):60-4.
4. Akkenapally PL. A comparative study of misoprostol only and mifepristone plus misoprostol in second trimester termination of pregnancy. The Journal of Obstetrics and Gynecology of India. 2016 Oct 1;66(1):251-7.
5. Jahagirdar SS, Junghare PS. Safety and efficacy of simultaneous use of Mifepristone and Misoprostol in second trimester termination of pregnancy. International Journal of Reproduction,

Contraception, Obstetrics and Gynecology. 2017 Feb 10;4(5):1359-63.
6. Patil SB. A comparative study using combination of mifepristone and misoprostol and single drug misoprostol only for second trimester abortion (Doctoral dissertation).
7. Patel, Lauva. J Obs Gyn India. 2006;56(6):522.
8. Kulkarni KK. Pre-induction with mifepristone for second trimester termination of pregnancy. The Journal of Obstetrics and Gynecology of India. 2014 Apr 1;64(2):102-4.
9. World Health Organization. Medical methods of pregnancy, World Health Organization, Geneva. 1997,871.