

# Misoprostol as aid in First Trimester MTP

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## Abstract

**Background :** Medical Termination of Pregnancy (MTP) is a commonly performed during the first trimester. Dilatation and Evacuation (D & E) mandates rapid dilatation of cervix with metal dilators, which requires anaesthesia and may be associated with trauma to the uterus, cervix and later cervical incompetence. The problem of rapid cervical dilatation is obviated with intravaginal misoprostol.

**Methods:** Intravaginal misoprostol tablet 200 microgram was inserted, a night prior to MTP to ripen the cervix. Cervix was dilated with metal dilators only in cases where cervix did not loosen up sufficiently. Products of conception were removed by suction.

**Results :** Out of 108 cases cervical dilatation was not required in 96 cases (88.9%).

**Conclusion :** Intravaginal misoprostol 200 microgram proved effective as a priming agent prior to MTP in the first trimester.

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**Key Words:** Misoprostol; MTP

## Introduction

Legally induced abortions in the first trimester form a bulk of gynaecologist's work. The options for the reversible form of contraception are wide and varied, but there is increasing demand for MTPs due to failure or non-use of contraceptives. Mifepristone is an anti-progestin which causes thinning and atrophy of the endometrium in 18-32 hours in non pregnant uterus [1] and by itself may cause abortion in 64-85% of cases up to 7 weeks of gestation [2]. Misoprostol is an orally active prostaglandin analogue which affects the uterine tone [3]. A large number of studies are available using Mifepristone followed by misoprostol which results in abortion in more than 90% of women with pregnancies up to 7 weeks of gestation [4,5]. However, considering the cost factor, we have used misoprostol alone as an aid for first trimester MTP.

## Material and Methods

It is a prospective study of 108 cases undergoing first trimester MTPs on outpatient basis with one alive and healthy child. Those having two or more children were motivated for tubal ligation along with MTP and were not included in the study. Period of gestation was 6 to 12 weeks. All underwent investigations in the form of haemoglobin, blood group – ABO Rh, VDRL, HBsAg and HIV. Patients with Previous LSCS, Haemoglobin < 10 Gm%, Fever, History of bronchial asthma or seizures, Cases of ischaemic and valvular heart disease, Glaucoma, positive VDRL, HBs Ag or HIV and History of known allergy to prostaglandins were excluded.

Patients were instructed to insert one tablet of Misoprostol 200 microgram intravaginally the previous night not earlier than 2100 hrs and lie recumbent in bed for at least an hour after insertion. They were told to watch for cramps of lower abdomen or vaginal bleeding and to report to the labour room immediately or at 0800 hrs the next morning to OPD. If the cervix was soft and patulous an appropriate size plastic cannula according to the period of gestation was inserted and products of conception were removed by suction followed by Inj Methergin 0.2 mg IV. In cases, where the cervix did not soften up, the patient was given Inj Atropine 0.6 mg IV and paracervical block with Inj Xylocaine. Cervix was dilated to the appropriate size with HA dilators, products removed by suction and followed by Inj Methergin 0.2mg IV. Patients were made to wait for two hours after the procedure for excessive vaginal bleeding. Patients were reviewed after a week and then after the next menses for insertion of Copper T or starting oral contraceptive pills for spacing.

## Results

The demographic profile of these patients is given in Table 1. 6 patients had uterine cramps along with vaginal bleeding, 6 to 8 hours after the insertion of tablet and had to report to labour room at night. In these cases internal os was open and patient was aborting which was completed with suction and Inj Methergin 0.2mg IV given. In 12 cases, cervix did not soften up and they underwent D & E, 2 at 6 weeks gestation, 9 between 6-8 weeks and one at 9 weeks. In 90 cases, cervix was soft and patulous, products were evacuated by suction and Inj Methergin 0.2 mg IV given. No complications like vomiting or loose motions were encountered. Success of misoprostol was taken as the number of cases in which cervix

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**Table 1**

**Demographic profile**

Parameters	No. of patients (n=108)
Age (years)	
21-25	69
25-30	20
30-35	17
> 35	02
Period of gestation (weeks)	
< 6	02
6-8	27
9-10	57
11-12	22

was sufficiently soft and pliable so as to dispense with rapid dilatation next morning. Outcome is given in Table 2.

**Discussion**

MTP in first trimester is being taken up as day care, employing of rapid dilatation with dilators followed by evacuation of products of conception by suction. Some centres, prefer the procedure as inpatient under general anaesthesia (GA). Both have their own drawbacks. In OPD procedure without GA, adequate analgesia may not be obtained despite paracervical block in certain number, especially late first trimester (10-12 weeks) and patient’s cooperation may not be forthcoming in such cases. Inpatient procedure is ideal but puts additional load on hospital resources. What is the way out? Medical mode of MTP with Mifepristone 600 mg orally followed by oral misoprostol 400 mg same day [6] or 48 hours later [7,8] achieves good success. The limiting factor is the relatively high cost of Mifepristone. In addition, this combination is successful only in the early first trimester [7,8]. The side effects in the form of bleeding and pain may be more with this combination as compared to surgical abortion [9]. In 1<sup>st</sup> trimester MTP cervical dilatation is the limiting factor especially when done without GA. Cervical priming by intravaginal insertion of misoprostol helps in suction and evacuation in a significant number of cases (88.8%) without using metal dilators. Success of cervical dilatation increases with period of gestation, from 66.7% at 6-8 weeks to 100% between 10-12 weeks. The low cost of misoprostol is an added advantage.

At present, surgical termination appears better than medical termination up to 9 weeks gestation [10]. We

**Table 2**

**Outcome with intravaginal misoprostol**

Period of gestation (weeks)	No. of cases	Success (cervical dilatation not required)		Failure (cervical dilatation required)	
		No. of cases	%	No. of cases	%
6	2	0	0	2	100
6-8	27	18	66.7	9	33.3
9-10	57	56	98.25	1	1.75
11-12	22	22	100	0	0

tried to incorporate these two modalities together to get the best of the two. For future, misoprostol alone as a method of MTP holds a lot of promise [11].

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