

# Misoprostol - efficacy and outcome of 100 patients with second trimester missed abortion

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## Abstract

Misoprostol is the best drug in the treatment of missed abortion in second trimester. It causes myometrial contraction by interacting with specific receptors on Myometrial cells this interaction results in a cascade of events including a change in calcium concentration, thereby initiating myometrial contraction. By interacting with prostaglandin receptors misoprostol causes cervix to soften and uterus to contract resulting in expulsion of uterine contents. This article provides an in-depth review of subject with the authors experience in the field. This article also described entity from its historical background, mode of action, time duration of expulsion of product of conception, dosage requirement and side effect of the drug.

**Keywords:** Misoprostol.

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## INTRODUCTION

Abortions have been around forever in the course of history. It received attention due to various reasons as promotion, complications and depromotions. Being a grave health and social concern, abortion is a critical issue. While incidences of abortion in India are unknown, figures suggest that 6.7 million abortions take place every year and about 1 million are performed legally. 2<sup>nd</sup> trimester abortions account for a small percentage of all induced abortions. It is associated with high morbid rates. The ideal method is still under investigations, medical methods of abortion with Misoprostol are considered to be effective. This research paper being such an investigation enquiring the safety of misoprostol in 2<sup>nd</sup> trimester abortion.

## Missed Abortion

An abortion is said to be missed abortion or an early fetal demise, when the fetus is dead and retained inside the uterus for a viable period. And characterized by persistence of vaginal discharge, regression of pregnancy changes, negative pregnancy tests, and lack of USG findings.

## Causes

1. Fetal chromosomal abnormalities.
2. Maternal diseases like hypertension.
3. Placental abnormalities.
4. Uterine abnormalities.
5. Embryonic abnormalities.

The various causes described above can cause abortion at second trimester and the enquiry about the safety of misoprostol in handling it is investigated.

## Misoprostol-a- prostaglandin e1 derivative

### Misoprostol: PGE1

- Drug used for cervical ripening and peptic ulcer disease.
- Transvaginally used for the induction of labour.
- A dose of 50µg every 3 hours to a maximum of six doses or 25µg every 4 hours to a maximum of eight doses or 50µg every hourly can be used.
- Optimum dose of misoprostol yet to be determined.
- Till date no effect on teratogenicity and carcinogenicity are

## AIM

The aims of this study being. To determine the effectiveness of misoprostol used in the treatment of missed abortion in the second trimester of pregnancy. To determine the safety of misoprostol used in the treatment of missed abortion in the second trimester of pregnancy. To study about the common adverse effects of misoprostol.

**Study Centre:** Bidar Institute of Medical Science, Government Teaching Hospital, Bidar, Karnataka, India.

**Duration of study:** 2013-2015 two years.

**Study Design:** Retrospective cohort study

## MATERIAL AND METHODS

**Sample Size:** 100 CASES

**Source of participants:** The source of participants being patients with missed abortion underwent misoprostol treatment.

**Inclusion Criteria:** Confirmed pregnancy of 13 weeks to 27 weeks of gestation.

**Exclusion Criteria:** Less than 13 weeks and beyond 27 weeks of gestation. Includes patients with suspected ectopic pregnancy, h/o allergy to either mifepristone or misoprostol, Hypertension, severe hepatic or renal disease, severe anemia, chronic systemic use of corticosteroids, chronic adrenal failure, coagulopathies, current therapy with anticoagulants and inherited porphyries'.

### Data collection

The data collected is from the information of patients from hospital records and from staff. Detail investigations were done in the patients presenting with abortion at 2<sup>nd</sup> trimester and medical management in the form of misoprostol tablets were done.

### Investigation

- 100 cases of medical abortion meeting the inclusion criteria were admitted and a detailed present and past history was recorded.
- Vital baseline parameters like pulse, BP, Temperature were recorded. Detailed per abdomen, per speculum and per vaginal examination were done.
- The haematological investigation included haemogram, blood group and typing, urine routine examination, blood sugar group, Australia antigen, VDRL, HBsAG and HIV.
- An ultrasonography was performed to confirm the period of gestation.
- Written informed consent regarding the dose of the drug, side effects, number of visits required and need for surgical intervention in case of failure was taken.
- All norms as per the MTP Act 1972 by the Government of India were adhered.

## The mode of treatment was as follows

1 TABLE OF 200 $\mu$ g misoprostol was administered intravaginally every 6 hours. The patients were reviewed to make sure that abortion was complete.

## DISCUSSION

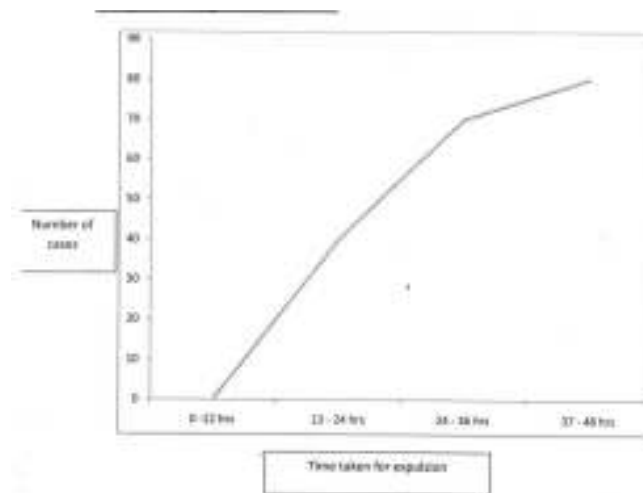
Abortion failure was defined as a need for evacuation of the uterus by a surgical technique for any reason, including the presence of,

1. Persistent gestational sac seen sonographically.
2. Excessive or prolonged uterine bleeding
3. Incomplete abortion

Table 1	
Dose	% of cases expelled
Tab 200 $\mu$ g	15
Tab 400 $\mu$ g	60
Tab 600 $\mu$ g	15

90% of cases expelled completely with misoprostol alone where as 5 % of cases required 5-10 units of oxytocin for the expulsion in the form of IV drip. 2 % of cases even after 48 hours did not expel. They have developed fever with WBC count increased to 15000-16000. The antibiotics, antipyrestics were given. Blood transfusion was done for 10% of cases because they were anaemic. The patients were taken for laparotomy and hysterotomy was done.

## GRAPHICAL REPRESENTATION



40 cases expelled in 12 hrs, 60-80% cases expelled in 24 Hrs, 90% cases expelled within 48 hrs.

### Side effects

The side effects of misoprostol being

- Fever with chills
- Abdominal pain

- Diarrhea
- Vomiting and nausea

**Table 2**

Symptoms	No of Cases
Shivering	5
Fever	2
Vomiting	3

Only 10 % of cases experienced side effects. And the side effects were treated at the time of onset in the form of antiemetics as slemset, and anti pyretics, antibiotics are given.

## CONCLUSION

The study of misoprostol in the management of abortion is studied in detail in our district hospital and the results in efficiency has be drawn. The less incidence of side effects and efficacy of drug as almost all patients

responded to misoprostol tablets with complete expulsion of the product of conception confirmed our hypothesis. These results confirm the efficacy and safety of misoprostol for induction of labour in 2<sup>nd</sup> trimester missed abortion.

## REFERENCE

1. Consortium on National consensus for the medical abortion in India (Internet) -2008 December.
2. Royal college of obstetricians and Gynaecologists-2004.
3. Journal of federation of obstetric and gynaecological societies of India (November- December 2013).
4. Kaekal M abortion laws and the abortion situation in India. (Reprod Genet Eng 1991; 4:223-30).
5. Randomised comparison of 3 misoprostol protocols for abortion induction at 13-20 weeks of gestation. (J Reprod Med 2005).
6. Misoprostol: Pharmacokinetic profiles, effects on the uterus and side effect. (Int J gynaecol Obstet 2007; 99:160-7)

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