

## Efficacy of Misoprostol In Inducing Abortion in 2nd Trimester With Previous One Cesarean Section

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### Abstract:

**Objective:** To determine the efficacy of misoprostol for inducing the abortion in 2nd trimester with previous one cesarean section. **Study Design:** Descriptive case series. **Setting:** Department of Obstetrics & Gynaecology, Nishtar Medical College and Hospital Multan. **Material and Methods:** The sample included 139 patients having previous one cesarean section with gestational age 14-20 wks assessed on ultrasound and having an indication for termination of pregnancy like IUD, fetal anomalies (neural anomaly, cardiac anomaly), medical disorder hypertension, diabetes mellitus. General physical examination was done by the researcher. Investigations including complete blood count, complete urine examination, random blood sugar, liver and kidney function tests, coagulation profile were carried out. The researcher placed misoprostol 200µg per vaginally every 4 hourly with overnight rest maximum for 72 hours. Efficacy of misoprostol was judged in terms of success rate in achieving termination. Termination of pregnancy was considered successfully if cervical os progressively dilated and both fetus and placenta expelled within 72 hours after insertion of 1st dose of misoprostol without surgical intervention. **Results.** A total of 139 cases fulfilling the inclusion criteria were enrolled to determine the efficacy of misoprostol for inducing abortion in 2nd trimester with previous one cesarean section. Among these patients 84.89% (n=118) were aborted effectively, 15.11% (n=21) were not effectively treated. **Conclusion;** Misoprostol for inducing the abortion in 2<sup>nd</sup> trimester with previous one cesarean section is effective for expulsion of the fetus and placenta.

**Keywords;** Abortion, Misoprostol, second trimester.

### Introduction

Termination of pregnancy by induced abortion is one of the commonest procedures. Majority 90% takes place in first trimester, mid trimester abortion constitutes 10-15% cases of induced abortion.<sup>1</sup> Medical methods for induced abortion have emerged over past two decades as a safe effective alternative to surgery.<sup>2</sup> The synthetic prostaglandin has largely replaced all other techniques for termination particularly in 2nd trimester because prostaglandin play an important role in regulation of uterine contractility.<sup>1, 3</sup> Misoprostol is a synthetic prostaglandin analogue that is used off level for variety of indications in practice of obstetrics and gynaecology including medical management of miscarriage, cervical ripening before surgical procedure and treatment of postpartum hemorrhage.<sup>4</sup> Misoprostol is widely available, is of low cost and easy to use both for patients and clinician.<sup>5,6</sup> Induction of labour with misoptostol in setting of previous 1 caesarean section although contraindicated in third trimester can be safely performed in 2nd trimester. The data on absolute risk of induction of labour with misoprostol are lacking, however several randomized trials showed no adverse effect.<sup>7</sup> Several retrospective studies have specifically addressed the safety of misoprostol use for 2nd trimester induction in prior caesarean section.<sup>7</sup> In one study success rate was 85%.<sup>8</sup>

The purported significance of this study is that it will review the efficacy of misoprostol in terms of success rate in mid trimester in women with previous one cesarean section so that we can judge that how effective it is to prevent the patients from surgical trauma and may reduce maternal morbidity.

### Materials and Methods.

The sample included 139 patients having previous 1 cesarean section with gestational age 14-20 weeks assessed on ultrasound and having an indication for termination of pregnancy like IUD, fetal anomalies (Neural anomaly, cardiac anomaly), medical disorders like hypertension, diabetes mellitus, General physical examination was done by the researcher and investigations including complete blood count, complete urine examination, random blood sugar liver and kidney function tests coagulation profile were carried out. The researcher placed misoprostol 200µg per vaginal every 4 hourly with overnight rest maximum for 72 hours.

Efficacy of misoprostol was judged in terms of success rate in achieving termination. Termination of pregnancy was considered successful if cervical os progressively dilated and both fetus and placenta expelled within 72 hours after insertion of 1st dose of misoprostol without surgical intervention. Completion of termination was assessed by consultant gynaecologist having 3 years post fellowship. Experience by clinical examination of abortus, cessation of bleeding, vaginal examination and confirmed by ultrasound.

### Results.

A total of 139 cases fulfilling inclusion / exclusion criteria were enrolled to determine the efficacy of misoprostol for inducing the abortion in 2nd trimester with previous 1 caesarian section. Regarding age distribution of patients 45.32% were between 18-25years of age, 33.8% were between 26-30 years, 20.87% were between 31-35years of age.

Gestational age of the patients revealed 58.27% between 14-16weeks of gestation, 41.73% were between 17-20 weeks of gestation. Distribution of parity was calculated 48.20% were between 1-2 para, 29.50% were between 3-4 para, 22.30% were with >4 para. Efficacy of misoprostol for inducing the abortion in 2nd trimester with previous one cesarean section, 84.89% were treated effectively, 15.11% were not effectively treated.

### Efficacy of Misoprostol for Inducing The Abortion in 2nd Trimester with Previous One Cesarean Section. (n=139)

Efficacy	No. of Patients	Percentage.
Yes	118	84.89%
No	21	15.11%
Total	139	100%

### Discussion.

Misoprostol is a synthetic prostaglandin analogue that is used off label for a variety of indications in the practice of obstetrics and gynaecology including medical management of miscarriage, induction of labour cervical repining before surgical procedures, and the treatment postpartum hemorrhage.<sup>4</sup>

There is variety of medical and surgical techniques for termination of pregnancy.<sup>9</sup> Mid trimester abortions constitutes 10-15% of all induced abortion. During the last decade, medical methods for mid trimester abortion have shown a considerable development and have become safe and more considerable.<sup>10, 11</sup>

Uterine evacuation by medical methods reduce the morbidity associated with surgical intervention.<sup>12, 13</sup>

The findings of the study were, most common age was 24.56+4.21 years, being the ideal age of marriage in our setup, 48.20% were between 1-2 paras. Efficacy of misoprostol for inducing the abortion in 2nd trimester with previous one cesarean section was 84.89%.

The findings of the study are in agreement with a study where 188 women with previous cesarean delivery underwent induction of labour between 17 to 24 weeks of gestation. The dose of misoprostol was 400µg vaginally for every 6 hourly for maximum 5 doses. In this study success rate was 85% while another study to determine efficacy of misoprostol vaginally for 2nd trimester abortion in woman with previous one cesarean delivery, the success rate was 90%.

Authors using misoprostol doses of 800µg every 12 hours for second trimester of pregnancy achieved a 91% complete abortion rate and majority of subjects aborted within 24 hours.

Considering the results of the current study it shows that misoprostol is effective even when administrated with low dose, which further extends the authenticity of the drug when used in mid trimester of the pregnancy even with a previous one cesarean section.

### Conclusion.

The results of the study conclude that misoprostol for inducing the abortion in 2<sup>nd</sup> trimester with previous one cesarean section is effective for expulsion of the fetus and placenta.

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