

## SAFETY AND EFFICACY OF MISOPROSTOL FOR TERMINATION OF 1<sup>ST</sup> AND 2<sup>ND</sup> TRIMESTER POST CESAREAN PREGNANCY

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**Abstract :** The purpose of the study was to evaluate the efficacy and safety of PGE<sub>1</sub> analogue, misoprostol, for inducing abortion in women who had prior one or more cesarean sections. Women who had to undergo termination of pregnancy between 10 and 22 weeks of gestation for various indications ( missed abortion, fetal anomaly, unwanted pregnancy etc. ) and had at least one previous cesarean section were reviewed over a two year period. Misoprostol 400mcg either vaginally or sublingually every 6hrs (up to maximum 24 hrs ) was the standard regimen for induction of abortion in all cases. A contemporaneous cohort of women having similar age and parity undergoing the same procedure for similar indications but without scarred uteri served as control. 80 women in the study group ( 64 had one and 16 had two prior C.S. ) underwent termination procedures for unwanted pregnancy ( 48 cases ), missed abortion ( 22 cases), or fetal anomaly ( 10 case ). The median induction-abortion interval was 15.4 hrs ( 10-21 hrs ) and did not differ much from that in women without previous cesarean delivery ( median:14.6 hrs ; range 9.6-20 hrs ),  $p=0.08$ . Misoprostol was found safe in post-cesarean women and there was no case of scar rupture or dehiscence. No significant difference in the occurrence of incomplete abortion, blood loss, and sepsis was detected in study group Vis-à-vis control group. The use of misoprostol in late-first and mid-trimester pregnancy termination in women with cesarean scar was found safe and effective and comparable with those in women without scarred uteri.

### INTRODUCTION

The synthetic prostaglandin - misoprostol (PGE<sub>1</sub> analogue ), has largely replaced all other techniques for pregnancy termination particularly in the second trimester because of its efficacy, safety, cost, easy-to-use and easy-to-store properties. Chapman et al<sup>1</sup>, in their series, reported higher incidence of uterine rupture and major hemorrhage in women with prior CS as compared to women with unscarred uteri following various techniques of mid-trimester pregnancy termination. The safety profile of misoprostol as abortifacient in women with a cesarean scar is yet to be established. Although case reports of uterine rupture have been published with both scarred<sup>2,3</sup> and unscarred uteri<sup>4</sup>, several other studies have shown misoprostol to be a safe agent<sup>5-8</sup> for use in post cesarean pregnancies. The aim of our study was to evaluate the safety and efficacy of misoprostol for inducing abortion in late-first and second trimester pregnancy termination in women with previous cesarean sections.

### MATERIAL AND METHODS

**Study Design:** (a) *Settings* : The study was conducted simultaneously in three medical colleges in West Bengal, India, between November 2003 and October 2005 (b) *Subjects* : Women admitted for pregnancy termination, due to unwanted pregnancy, missed abortion, fetal anomaly. Those women who had at least one prior LSCS and carrying 10-22 weeks pregnancy were included in the study group (Gr A) and a contemporaneous cohort of women with similar gestational period, age and parity but without any previous CS were included in the control group (Gr B).

**Methods:** Women who had Hb level < 9g % received prophylactic blood transfusions ( at least 2 units ) before the pregnancy termination procedure. Misoprostol 400 mcg every 6 hrs intravaginally ( 50 cases in each Gr ) or sublingually ( 30 cases in each Gr ) was the standard regimen and continued for a maximum period of 24 hrs. The specific data recorded included maternal age, parity, no of previous CS (in Gr A), period of gestation, indication for abortion, induction-abortion interval and complications (blood

loss, hypovolumic shock, therapeutic blood transfusion, incomplete abortion, uterine rupture, failure of procedure). Depending on the period of gestation and cervical status all women who did not abort within 24hrs ( partial failure of procedure) received additional doses of misoprostol or PGE<sub>2</sub> gel or concentrated oxytocin or were evacuated surgically through dilated cervix. Incomplete abortions were also surgically evacuated to complete the process.

The outcome in two groups were systematically analyzed using statistical techniques, software "Sigmasat-2", Fisher exact test or X<sup>2</sup> test and a p-value of .05 or more was not considered as significant.

### RESULTS

Maternal demographic characteristics did not vary significantly in two groups of women (Table I). Though during the study period a large number of women (including nulliparous) without prior cesarean deliveries had undergone pregnancy terminations only those women who could match demographically with group A (women with prior cesarean deliveries) were selected as control (group B) for comparative study. So for comparison only 80 women were included in the control group which was also the number of women in the study group.

Unwanted pregnancy was the principal indication for termination ( 60% in Gr A; 57.5% in Gr B ); missed abortion was the next ( 27.5% in Gr A ; 28.75% in Gr B ) common indication. Fetal anomaly ( with a live fetus ) was associated with 12.5% in Gr A and 13.75% in Gr B women. As mentioned earlier women in the control group were selected in such a way that their median age and period of gestation differed little from those in the study group.

**Table 1 :** General characteristics ( median and range ) and indications ( n and % )

Characteristics	Group A ( prior CS ) n=80	Group B (no prior CS ) n =80
Maternal age in yrs	28 ( 20-38 )	27 ( 18-37 )
Parity	1 ( 1-3 )	1 ( 1-3 )
Period of gestation in weeks	14.5 ( 10-22 )	15 ( 10-22 )
Indication for termination		
a. unwanted pregnancy	48 ( 60 )	46 ( 57.5 )
b. missed abortion	22 ( 27.5 )	23 ( 28.75 )
c. fetal anomaly	10 ( 12.5 )	11 ( 13.75 )

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