ORIGINAL ARTICLE

ROLE OF MISOPROSTOL IN INDUCING ABORTION IN PREVIOUS CAESAREAN SECTION

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ABSTRACT

Objective — *To determine the effectiveness of misoprostol in second trimester abortion in post caesarean cases in terms of complications and side effects.*

Study design — *Descriptive study.*

Place & Duration of study — *Department of Obstetrics & Gynaecology, Baqai Medical University and Private Clinics, From January 2007 to January 2009.*

Patients and Methods — *Fifty patients were selected for the study. Gestational age was between 14-20 weeks. They received 400 microgram of misoprostol tablets moistened with 2-4 drops of water intravaginally. Effectiveness was determined by the number of women who expelled fetus/product of contraception without the need for surgical intervention in a previously scarred uterus.*

Results — *Patients in the study group underwent termination of pregnancy for missed abortion (n 32), foetal anomaly (n14) and foetal demise (n 4). The median induction-abortion interval was 16 hours (range 10-21 hours). Misoprostol was found to be safe in our cases of post caesarean women and there was no case of scar rupture or dehiscence, haemorrhage and shock.*

Conclusions — *The use of misoprostol to mid trimester abortion is a type of day care abortion and not contraindicated in women with previous scar uterus in terms of complication and side effects.*

Key words — *Misoprostol, Caesarean Section, Missed Abortion.*

INTRODUCTION:

Termination of pregnancy is one of the common procedures in gynaecological practice. The synthetic prostaglandin, misoprostol (PGE1 analogue) has largely replaced all other techniques for pregnancy termination particularly in the second trimester.[1] Misoprostol is useful for elective medical abortions, cervical ripening before surgical abortion, evacuation of uterus in cases of embryonic or fetal death and induction of labour.[2] Misoprostol is widely available, of low cost, stable at room temperature and easy to use for both patients and clinician makes this an excellent treatment in low resource setting.[3,4] Misoprostol is also safe in post caesarean pregnancies.

The aim of our study was to determine the safety and efficacy of misoprostol for termination of second trimester abortion in women with previous caesarean section.

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PATIENTS AND METHODS:

This descriptive study was carried out at the Department of Obstetrics & Gynaecology at Baqai Medical University and in some private clinics. We selected women for termination of pregnancy having nonviable pregnancy between 14-20 weeks gestation, an embryonic gestation (blighted ovum) and foetal anomalies. All pregnant women of gestational age >24 weeks, hypersensitivity to prostaglandin, those with the history of bronchial asthma, were excluded. Procedure was considered to fail had there been no response within 24 hours of placement of the tablets.

The diagnosis of cases was made by two ultrasound scans one week apart by a trained specialist. Eligible women were then admitted to hospital for process of termination of pregnancy. Routine physical examination and investigations including complete blood picture, urine examination, random blood sugar, liver and kidney function tests and coagulation profile were carried out. Patients having haemoglobin level less than 8 gms/dl received packed cells before termination. .

In this study misoprostol, 400 microgram with 2-3 drops of water, was placed in vaginal fornix and repeated after 8 hour for maximum of 24 hours. Uterine contractions, blood pressure and pulse were recorded 1 and 4 hours after every dose. A vaginal examination was performed before each dose. Also time of expulsion was recorded. After expulsion one additional dose of tablet was inserted per rectally. Maximum of 2-4 doses were given. If abortion had not began within 24 hours the procedure was abandoned and surgical intervention done. Successful outcome was defined as complete or partial expulsion of uterine content, within 24 hours. .

The specific data recorded included maternal age, parity and period of gestation. Complications such as blood loss, hypovolemic shock, uterine scar rupture were recorded. The data was collected and analyzed by SPSS-10 program.

RESULTS:

Maternal age ranged between 20-38 years and parity 1-4 (median 2). Indication of termination was missed abortion in 32 (64%) cases, foetal anomaly in 14 (28%) cases and foetal demise in 4 (8%). Median induction –abortion interval was 16 hours(range 10 – 21 hours). Abortion occurred after single dose in 32 cases and in 10 cases two doses were required. Four women needed surgical intervention (repeat ultrasound revealed retained products of contraception (RPOC) while 4 cases expelled after 24 hours. Patients were followed up after two weeks. Only two patients had irregular bleeding after two weeks with RPOCs on ultrasonography. They were admitted for further evaluation and evacuation.

DISCUSSION:

There are variety of medical and surgical techniques for termination of pregnancy.[5] Mid trimester abortion constitutes 10-15 % of all induced abortions. During the last decade, medical methods for mid trimester abortion have shown a considerable development and have become safe and more considerable.[6,7] Uterine evacuation by medical methods reduces the morbidity associated with surgical intervention.[8,9]

Misoprostol, a prostaglandin PGE1 analogue has cervical ripening and uterotonic properties thus making it a useful drug in obstetrics.[10,11] The need for pregnancy termination in women with previous caesarean section is not uncommon but efficacy and safety profile of any termination technique is limited. Most of the reports showed misoprostol to be relatively safe for use in women with prior caesarean section in second trimester.[12,13] Our study did not find any increase in complications following vaginal use of misoprostol in termination of mid trimester pregnancy after previous caesarean section.

Misoprostol is widly available. It is of low cost and stable at room temperature. It is easy to use both for the patients and clinicians. It is thus an excellent choice of treatment for use in low resource setting.[14] Dickinson concluded that in second trimester abortion the use of misoprostol in women with prior caesarean delivery was not associated with an excess of complications compared with women with unscarred uteri.[15,12] Authors using misoprostol doses of 800microgram every 12 hour for second trimester of pregnancy achieved a 91% complete abortion rate and majority of subjects (85.6%) aborted within 24 hours with mean expulsion time of 12.1+ 3.5hours for the foetus and 13.2+3.8hours for the placenta.[17]

This is closer to our study where 92% aborted completely within 24 hours with mean induction–abortion interval of 16 hours. It is also found that moistened misoprostol tablets were more effective for medical termination of early pregnancy than dry tablets, because it is important to develop a preparation or medium that would ensure more complete dissolution of vaginal misoprostol tablet

in order to achieve optimal efficacy. Intravaginal tablets moistened with saline solution resulted in higher success rate of early termination of pregnancy.[18]

Misoprostol has certain side effects like nausea, vomiting and diarrhoea. Studies conclude that oral misoprostol had exerted a modest but transient antihypertensive effect. There has been increasing caesarean section rate over the past few years but there is still safety of early medical termination via misoprostol in terms of complications which are inevitable after any termination method used in second trimester pregnancy. There is a small case series of 87 women with at least one caesarean section undergoing second trimester pregnancy termination with misoprostol, reported no cases of uterine rupture.[19] On the other hand a retrospective series of 606 cases using PGE2, concentrated oxytocin and dilute oxytocin reported an increase incidence of uterine rupture and need for blood transfusion in women with prior caesarean section.[20] Misoprostol provides a type of day care abortion thus minimize disruption to the lives of women and their families.

CONCLUSIONS :

Misoprostol alone is a first line option in second trimester abortion with no contraindication in women with previous caesarean delivery.

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