ORIGINAL ARTICLE

Medical Management of Second Trimester Miscarriage With Misoprostol

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ABSTRACT

Aim: To evaluate the medical management of second trimester miscarriage with misoprostol
Methodology: A study was performed conducted at obstetrics and gynecology unit A, Mardan Medical Complex Hospital, Mardan from Dec. 2018 to Oct. 2019.
Sample size: Hundred women with 2nd trimester pregnancy loss were included. Age ranges from 16 to 45 years and parity ranges from zero to para five. Ethical approval has been taken from ethical committee.
Results: The use of misoprostol in 2nd trimester miscarriages resulted in 100% success rate. Mean induction to expulsion interval was 18 hrs. Toxic effects noted were pain, pyrexia, nausea, vomiting and diarrhea and are reversible. There is no relationship between parity and response to misoprostol. In this study, anencephalies, hydrocephalies, intrauterine fetal deaths were 30, 28, and 30 respectively. More than one side effect was noted in 14 patients. Treatment of 2nd trimester pregnancy loss with misoprostol is efficient, acceptable and cost effective.
Conclusion: Misoprostol is associated with high success rate within 48 hrs of first dose.
Key words: Misoprostol, Miscarriage, Intrauterine Fetal Death

INTRODUCTION

Pregnancy loss between 12th and 24th weeks is called as miscarriage.[1] The frequent complication of pregnancy is spontaneous miscarriage and observed in approximately 1/5th of the pregnancies. Within the first 12 complete weeks of the pregnancy, miscarriages occur mostly. Fetal abnormalities, maternal uterine abnormalities and cervical insufficiency are the main causes of 2nd trimester loss of pregnancy .[2] Many other factors responsible for pregnancy loss are factor V Leiden mutation, protein S deficiency, G20210A mutation and antiphospholipid antibodies. Chromosomal abnormalities and infections are also seen in 10-25% cases[3].

Misoprostol is a stable, synthetic form of prostaglandin E1 analogue[4]. Misoprostol is used vaginally or sublingually with dose of 400ug 3 hourly and gap of 12 hours is effective when using doses of 600ug or 800ug of misoprostol.[5]

METHODOLOGY

Sample size: Hundred women were included in this study.
Study duration: 01-12-2018 to 30-10- 2019 i.e. for 11 months at Mardan Medical Complex Hospital, Mardan.
Inclusion criteria: Gestational age of 13 weeks to 26 weeks was included.
Exclusion criteria: Patients with history of hypersensitivity to prostaglandin, previous uterine surgery, chronic medical disease like bronchial asthma and cardiac problems were excluded.

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Ethical approval has been taken from the committee. An informed written consent has been taken. Investigations like CBC, urine C/E, BSR, LFT, RFT, blood grouping, HBsAg and HcV, PT/INR has been done. Misoprostol was inserted intra-vaginally in posterior fornix 400ug, with repeated dose of 400ug every 6 hourly (5 doses). Vital signs, vaginal bleeding and abdominal pain were assessed.

RESULTS

The detail of results is given in tables 1,2,3

Table 1: Demographic Characteristics

	Yrs	n=
Age	16-20	16
	21-30	20
	31-40	40
	41-45	24
Education	Nil	37
	Primary	13
	Middle	20
	Matric	17
	Intermediate	13
Area	Urban	23
	Rural	77
Ethnicity	Muslim	98
	Christian	02
Employment	Employed	0
	Unemployed	100
Husband Income	NIL	09
	Till 5000	11
	5000-10000	23
	10000-15000	37
	15000-20000	20

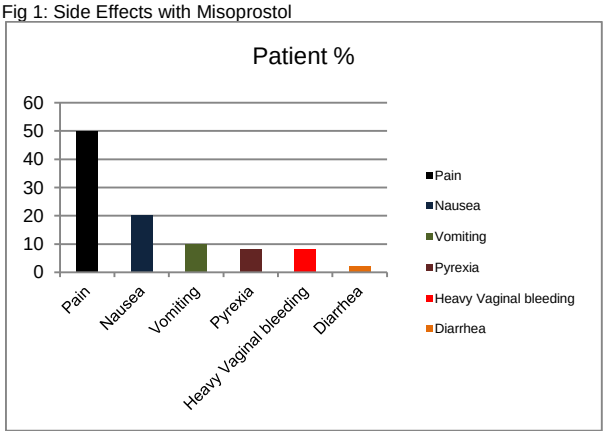
Table 2: Distributions According to Parity

Parity	n=
PG	45
1-4	20
4-5	35

Table 3: Side Effects with Misoprostol

Side Effects	N=
Pain	50
Nausea	20
Vomiting	10
Pyrexia	8
Heavy Vaginal Bleeding	8
Diarrhea	2

Fig 1: Side Effects with Misoprostol



DISCUSSION

In this study, the use of misoprostol in 2nd trimester pregnancy loss resulted in 100% success rate. Mean induction to expulsion interval was 18 hrs in this study. Toxic effects observed were pain, pyrexia, nausea, vomiting and diarrhea and reversible. There was no correlation between parity and response to treatment with misoprostol. In this study, anencephalies, hydrocephalies, intrauterine fetal deaths were 30, 28, and 30 respectively.

In a study by different researchers, different doses of misoprostol were introduced intravaginally i.e. 200 ug hourly, 400 ug 6 hourly, 600ug loading dose followed by 200ug 6 hourly. The results of 400ug dosage were satisfactory. They also compared oral and vaginal routes and showed vaginal route better than oral one. Dose of misoprostol is directly proportional to the toxic effects.[6,7] In another study, results of 48 hours of misoprostol induction was 88.8% for IUFD and 90.9% in general cases with dose of 400ug 3 hourly for 5 doses.[8]

In our study, with 400ug misoprostol, the results are 100%. These excellent results may be due to 6 hourly dose for 5 doses. Another study showed induction to abortion interval 12.3 hours with 400ug 4 hourly and results are 68%[9]. But our study showed induction to abortion interval 18 hours with 400ug 6 hourly and results are 100%.

In one study, oral, sublingual and vaginal routes were studied and found minor toxic effects in vaginal route as compared to other routes[10]. As concerned with toxic effects in our study, these are pyrexia (7%), nausea (15%), vomiting (12%), diarrhea (2%), and heavy vaginal bleeding (16%). This is in accordance with the study of Mazhar et al. (2013)[11]. Side effects other than vaginal route are more in other study.[12]

CONCLUSION

Management of 2nd trimester pregnancy loss with misoprostol is efficient, acceptable and cost effective. Age, parity and gestational age did not affect the abortion using misoprostol.

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