CODEN [USA]: IAJPBB ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

http://doi.org/10.5281/zenodo.3549687

Available online at: http://www.iajps.com Research Article

A COMPARATIVE ANALYSIS OF SUCCESSFUL ABORTION RATE OF MIFEPRISTONE –MISOPROSTOL COMBINATION WITH EXRTAAMNIOTIC ETHACRIDINE LACTATE – MISOPROSTOL FOR TERMINATION OF SECOND TRIMESTER PREGNANCY

Dr.Mehwish Liaquat, Dr.Misbah Haider, Dr.Atika Javed
Allama Iqbal Medical College Lahore

Abstract:
The abortion procedure is one of the most common practices in practice, requiring a method of safe and effective abortion.
Objective: *the aim of the study was to compare the successful abortion rate and the average induction-abortion interval.*
Material and methods: *the presentation was conducted among patients admitted to hospitals connected to Allama Iqbal Medical College lahore during the study period from November 2017 to October 2018. Patients will be randomized into two groups. Patients who entered abortions in the second trimester in the hospitals mentioned above were assigned a serial number from one to eighty, and all patients with even numbers are assigned to group 1 and all patients with odd numbers are assigned to group 2 , with each group 40 women.*
Results: *In the present study, the mean induction cut-off interval for group 1 was 19.56 ± 1.82 hours and for group 2 it was 14.13 ± 2.72 hours. This was statistically significant. Of the 40 cases in each group, 37 had a complete abortion; H. 92.5% 3 cases (7.5%) of both groups had an incomplete abortion and were supplemented with control curettage in both groups.*
Conclusion: *the ethacridinolactate, which is also immersed in the amniotic compared to the vaginal misoprostol, is safer and more acceptable, has a short I-A interval compared to mifepristone-misoprostol for the second trimester of termination of pregnancy.*
Keywords: *Abortion rate, Induction-abortion interval Extraamniotic; Ethacridine lactate, Mifepristone, Second trimester abortion, Misoprostol.*

Corresponding author:
Dr. Mehwish Liaquat,
Allama Iqbal Medical College Lahore

QR code

Please cite t h i s article in press Mehwish Liaquat et al., ***A Comparative Analysis Of Successful Abortion Rate Of Mifepristone –Misoprostol Combination With Exrtaamniotic Ethacridine Lactate – Misoprostol For Termination Of Second Trimester Pregnancy.,*** *Indo Am. J. P. Sci, 2019; 06(11).*

INTRODUCTION:

Mid-term abortion is among the most controversial areas of gynecological practice.1,2 There are moral, emotional, social and technical problems.1,2 Many medical and surgical methods have been used for MTP in the 2nd quarter with varying degrees of success several induction attempts demolition interval.3 Reasons for fetal death, fetal anomalies, contraceptive failure, identification of genetic and metabolic disorders to protect maternal health.3-5 A combination of mifepristone and misoprostol is effective for second-quarter medical abortions. Pretreatment with mifepristone contributes to the efficacy of misoprostol as an abortifacient 3. The good therapeutic regime is still under investigation, but it must be characterized by a short interval of induction abortion, low side effects, reduced surgical intervention, high interruption rate and high acceptance. This study therefore aims to compare the successful abortion rate of the combination mifepristone-misoprostol with estaamniotic etrcramminotate-misoprostol with abortion (second trimester). The aim of the study was to compare the successful abortion rate and the average induction-abortion interval.

MATERIALS AND METHODS:

The gift was given to patients admitted to hospitals affiliated Allama Iqbal Medical College Lahore Patients admitted to the aforementioned hospitals during the 1-year study period from November 2017 to October 2018 will be included in the study. The approval for the study was obtained by the university authorities before the start. Patients are randomized into two groups. Patients who entered abortions in the second trimester in the hospitals mentioned above were assigned a serial number from 1 to 80, and all patients with even numbers are assigned to group 1 and all patients with odd numbers are assigned to group 2 , with each group 40 women.

Inclusion criteria: healthy women between the ages of 21 and 35 with an intrauterine pregnancy between 13 and 20 weeks of gestation who were admitted to abortion.

Exclusion criteria: multiple pregnancies, large multiparaceae, cardiac, renal and hepatic diseases, scarred uterus, broken membranes, placental prevalence, hemoglobin less than 8 g%, bleeding disorders and treatment with anticoagulants, intolerance to misoprostol and etacridine lactate.

Method: gestational age is determined by the first day of the last menstrual period (LMP), from the pelvic and bimanual age examination. Urine pregnancy test if performed early in pregnancy.1 Obstetric ultrasonography will be performed if the LMP date is unknown or if the LMP and clinical results differ. 1.5 A written informed consent is obtained from each patient. The selected patients are registered, a detailed medical history is recorded, routine examinations are sent and the gestational age is confirmed.

Group 1: a single dose of 200 mg of mifepristone taken orally, 12 hours after 400 µg of vaginal misoprostol and 400 µg repeated every 4 hours if no response occurs for up to 5 doses. Vaginal examination every 4 hours**. Group 2:** 0.1% extraamniotic etacridine lactate (10 ml per gestational week up to a maximum of 150 ml, instilled with Foley catheter, onion inflated with 20 ml distal water), followed by 6 hours of intravaginal misoprostol (400 µg / 4 hours), if necessary maximum 5 doses no reaction occurs. Four-hour vaginal examination performed. The Foley catheter is removed after 24 hours if not spontaneously expelled. Patients in each group will be informed of the dosage regimen, side effects such as nausea / vomiting, diarrhea, headache, fever, chills, abdominal cramps and complications such as overstimulation, cervical rupture and uterine rupture. Heart rate, blood pressure and uterine contraction are recorded every 4 hours. The induction termination interval is calculated as the time elapsed from the first insertion of mifepristone / ethacridine lactate to the termination of the fetus and placenta.4 A complete abortion is defined as the expulsion of the fetus and the placenta without surgery If the placenta appears completely, no further surgery is performed. If the placenta is incomplete or cannot be expelled, aspiration or curettage is controlled.4 Those who have not expelled the fetus within 48 hours are considered failures. 1.5

Table 1: Indications for abortion

Indications		Gr 1	Gr 2	Total
Anomalies	No.	15	23	38
	%	37.5%	57.5%	47.5%
IUFD	No.	11	10	21
	%	27.5%	25.0%	26.3%
MTP+Tubectomy	No.	8	6	14
	%	20.0%	15.0%	17.5%
Humanitarian	No.	6	1	7
	%	15.0%	2.5%	8.8%
Total	No.	40	40	80
	%	100%	100%	100%
Chi-Square	5.59	P = 0.13, NS		
P > 0.05, Not Sig.				

Data analysis

SPSS (version 16) was used during the analysis. Average ± SD and range values for continuous data and number and percentages for categorical data. T-test (unpaired) was used to compare averages. The chi-square test was used to analyze the catagorative data. A P value of 0.05 or lower was taken into account for statistical significance.

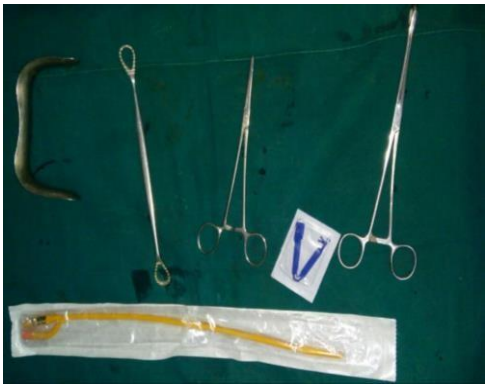

Fig. 1: Instruments used for ethacridine lactate instillation

RESULTS:

The majority of cases in both groups ranged from 21 to 25 years, the average age was 24.7 ± 4.0 years in group 1 and 25.8 ± 4.4 years in group 2. The interval in both groups were between 21 and 35 years old. (P value> 0.05). Most of the group participants were Multigravidas. In group 1, 42.5% were Primigravida and 57.5% Multigravida. In group 2, 30.0% were Primigravida and 70.0% Multigravida. Eleven cases of group 1 and 12 of group 2 were pregnant between 14 and 16 weeks. 29 pregnant women from group 1 and 28 cases from group 2 were pregnant for 18 to 20 weeks Most cases were interrupted in both groups due to abnormal fetuses as an indication, followed by IUFD, MTP + tubectomy and humanitarian reasons.

65% of cases in group 1 used 1-2 doses of misoprostol, while the mean dose of misoprostol was 2.3. 82.5% of pregnant women in group 2 used 1 to 2 doses of misoprostol, while the dose of misoprostol was 1.9. Doses of 1.9 ± 0.6 in combination with 760 ± 240 µg of misoprostol were significant. p <0.001

Table 2: Number of dose of misoprostol used

No. of Misoprostol		Gr 1	Gr 2	Total
1 - 2	No.	26	33	59
	%	65.0%	82.5%	73.8%
3 - 4	No.	14	7	21
	%	35.0%	17.5%	26.3%
Total	No.	40	40	80
	%	100%	100%	100%
Mean±SD		2.3±0.6	1.9±0.6	-
Gr 1 v/s Gr 2		t = 10.50, p < 0.001, HS		
Unpaired t test				

Table 3: Induction to abortion interval

Induction- Abortion Interval (Hrs)		Gr 1	Gr 2	Total
< 12 Hrs	No.	0	7	7
	%	0.0%	17.5%	8.8%
12 -- 18 Hrs	No.	5	28	33
	%	12.5%	70.0%	41.3%
18 -- 24 Hrs	No.	35	5	40
	%	87.5%	12.5%	50.0%
Total	No.	40	40	80
	%	100%	100%	100%
Mean Age ± SD (Hrs)		19.56±1.82	14.13±2.72	-
Range		16 - 23.Hrs	9 - 21.5 Hrs	
Gr 1 v/s Gr 2		t = 10.50, p < 0.001, HS		
Unpaired t test				

Of the 40 cases in each group, 37 had a complete abortion; H. 92.5% 3 cases (7.5%) of both The groups had an incomplete abortion and were integrated with control curettages in both groups

Table 4: Outcome in two groups

Outcome		**Gr 1**	**Gr 2**	**Total**
Complete	No.	37	37	74
	%	92.5%	92.5%	92.5%
Incomplete	No.	3	3	6
	%	7.5%	7.5%	7.5%
Total	No.	40	40	80
	%	100%	100%	100%

DISCUSSION:

The induction abortion interval obtained in group 2 is comparable to other studies conducted by different authors on extraamniotic etoprocrine lactate misoprostol for the interruption of the II trimester, and it was shorter than other studies

Authors	**Extraamniotic ethacridine-vaginal misoprostol**
Mamta G et al [6]	18.3±6.1 hours
Siddareddy Y et al [47]	16.44 hours
Jyothi IS et al [2]	19.8±10.15hours
Present study	14.13±2.72 hours.

with mifepristone 12 hours before the improved intravaginal misoprostol Induction termination interval (6.72 ± 2.26 hours) .3 Interval IA is taken after misoprostol administration. From the administration of mifepristone to abortion, the time is 18.72 ± 2.26 hours. In the present study, the above interval was 19.56 ± 1.82 hours, which is comparable. Neelamma Patil, Priyanka Gupta, Megha D. Hittinhalli, Subhashandra R. Mudanur, Manpreet Kaur J. et al. In 2017 a study was conducted to compare the effectiveness of 12-hour pre-induction of mifepristone compared to 24 hours before abortion in the second quarter 9.3 hours after the administration of misoprostol 12 hours after the administration of mifepristone.47 The interval of induction cessation is calculated after the administration of misoprostol. The time from the administration of mifepristone to abortion is 21.3 hours. In our study, the induction cut-off interval is measured from the time of mifepristone administration until the end, which was 19.56 ± 1.82 hours. Therefore, the results are comparable. The same study reported by Smiti Nanda and Anshu Pau et al. The range of induction to abortion in the mifepristone misoprostol group was 58.31 ± 3.62 hours with a complete abortion rate of 90%. Misoprostol was administered 48 hours after the administration of mifepristone in the study. The mean time between misoprostol and abortion was 10.54 ± 5.81 hours.4 In our study, misoprostol is administered 12 hours after mifepristone and induction The abortion interval is measured from the time of administration of mifepristone to abortion at 19.56 ± 1.82 hours at a complete abortion rate of 92.5%. Therefore, the results are comparable. RCOG Best Practice recommends stopping a medical termination starting from a fourteen-week pregnancy. Mifepristone and misoprostol must be used to reduce the induction interval. ACOG recommends mifepristone 200 mg orally, followed by misoprostol 800 µg vaginally in 24-48 hours, followed by 400 µg every 3 hours with a maximum of 5 doses. If abortion is not

completed after 5 doses, women can rest before starting the next cycle.47 The method recommended by the WHO for medical abortion is the oral administration of 200 mg of mifepristone, followed by repeated doses of misoprostol 36 to 48 hours later. The initial dose of misoprostol after oral administration of mifepristone can be 800 & mgr; g vaginal or 400 .mu. be administered orally. The subsequent doses of misoprostol should be 400 & mgr; g administered vaginally or sublingually up to four more doses every 3 hours.47 The protocol proposed by FOGSI is also mifepristone 200 mg, followed by misoprostol 400 µg after 36-48 hours, orally, sublingually or vaginally every 4-6 hours for a maximum of 5 doses.47 However, the present study showed that the duration between Mifepristone and misoprostol can be reduced to 12 hours without compromising efficacy. Comparison of complete abortion rate of present study with different studies shown below:

Authors	Mifepristone -misoprostol	Ethacridine -misoprostol
Nanda S et al,[4]	90%	-
Mamta G et al [6]	-	83.33%
Jyothi IS et al [2]	-	72%
Nagaria T et al[3]	95%	-
Patil N et al[47]	100%	-
Siddareddy Y et al [46]	-	99%
Present study	92.5%	92.5%

If the placenta is incomplete or cannot be expelled, aspiration or curettage is controlled.4

3 cases (7.5%) of both groups had an incomplete abortion and were integrated with control curettages in both groups

CONCLUSION:

Misoprostol had a synergistic effect on prostaglandin, which was released by the detachment of the membranes from extra-amniotic etacridine. With this combination, the success rate was high (92.5%), with a short induction abortion interval and a lower incomplete abortion rate without major complications. Therefore, the etacridine lactate, which is instilled • extra-amniotic followed by the vaginal misoprostol, is more effective, safer and acceptable and has a short interval of induction interruption compared to mifepristone misoprostol.

REFERENCES:

1. Biswas SC, Dey R, Jana R, Chattopadhya N. Comparative study of intravaginal misoprostol and extraamniotic ethacridine lactate instillation for mid trimester pregnancy termination. J Obstet Gynecol India. 2007;57(3):210-12.
2. Jyothi IS, Reddy KA, Saritha A. Comparative Study of Efficacy of Extra-amniotic Ethacridine Lactate with Oxytocin versus Extra-amniotic Ethacridine Lactate with Intravaginal Misoprostol for Termination of Pregnancy with IUD Anamolous Fetuses in Second and Third Trimesters. Indian Journal of Mednodent and Allied Sciences. 2015;3(3):155-60.
3. Nagaria T, Sirmor N. Misoprostol versus mifepristone and misoprostol in second trimester termination of pregnancy. The Journal of Obstetrics and Gynecology of India. 2011;61(6):659-62.
4. Nanda S, Paul A. Comparison of efficacy and safety of mifepristone-misoprostol combination with ethacridine lactate in mid-trimester termination of pregnancy. International Journal of Medicine and Medical Sciences. 2013;5(6):307-11.
5. Chaudhuri S, Mitra SN, Chaudhuri N, Chattopadhya D, Banerjee D, Bose S. A comparison of intravaginal misoprostol with extraamniotic etharidine lactate for second trimester MTP. J Obstet and Gynecol India. 2006;56(6):518-21.
6. Mamta G, Kant SK, Ramavatar B, Gupta S. Comparative Study of Intravaginal Misoprostol Alone 'Versus' Extra Amniotic Ethacridine Lactate Instillation Followed by Intravaginal Misoprostol' for Mid Trimester (13-20 Weeks) Termination of Pregnancy. IOSR Journal of Dental and Medical Sciences (IOSR-JDMS). 1(15):129-32.
7. Yashvardhini Siddareddy, Himabindu Sangabathula. A comparative study of ethacridine lactate with vaginal misoprostol versus vaginal misoprostol alone for mid trimester abortion. IAIM, 2017;4(6):38-44
8. Patil N, Gupta P, Hittinhalli MD, Mudanur SR, Tehalia MKJ, Nemagouda AS et al. A randomised controlled trial to compare the efficacy of preinduction with mifepristone 12 hours versus 24 hours prior for second trimister pregnancy termination. Int J Reprod Contracept Obstet Gynecol. 2017;6:3628-32.