



Original Research Article

Therapeutic goals of terminaton and their efficacy in patients

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ABSTRACT

Background and Objectives: The purpose of this study is to provide the most safest, effective and cost-effective method with least or no complications in both first and second trimester.

Induction abortion can be done either by medical or surgical methods. Medical method of abortion has advantages over surgical methods. The morbidity of the second trimester abortion continues to be more than the morbidity of first trimester termination. Causes for termination in Telangana region include oral contraceptive failure, Fetal anomalies, Lack of knowledge on termination procedure.

Materials and Methods: A Prospective observational study was conducted for 6 months, a total of 120 women in the first and second trimester of pregnancy who are eligible for termination following inclusion and exclusion criteria were included, the women attending at, Govt. maternity Hospital, Hanamkonda, Warangal. The main outcome in studied were, induction abortion interval, incidence of side-effects, success rates, pain pattern and bleeding pattern.

Results: For first trimester abortion mifepristone followed by misoprostol is found to be more effective, has shorter induction abortion interval and lesser side effects compared to misoprostol alone, D&C regimen. For second trimester abortion misoprostol is found to be more effective, has shorter induction abortion interval and lesser side effects compared to D&C, Foley's catheter, Hysterotomy regimens.

Conclusions: All methods used in the department showed efficacy and it does not effect on conceiving rate of women.

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1. Introduction

Abortion is removal of embryo or fetus which weighs 500 g or less which is not capable of independent survival.¹ Medical method of abortion has less success rate than that of surgical abortion.²⁻⁵ In India, every year at about 6 millions of abortions takes place were 4 million are induced and 2 million are spontaneous.⁶ At about 70,000 women yearly were killed by unsafe abortion which was estimated by WHO. The most effective, fastest and safest method was combination of mifepristone and misoprostol.⁷ For management of second trimester termination the medical

induction has become the mainstay.^{8,9} In Recent scenario, MTP Amendment Bill, 2020 seeks that termination of pregnancy period extended from 20 weeks to 24 weeks, making it easier for the women to get legally and safely terminate an unwanted pregnancy.¹⁰

2. Aim of the Study

1. To compare efficacy and safety for termination of pregnancy in first and second trimester.
2. To determine shortest induction abortion interval between groups.
3. To assess the safety of drugs.
4. To evaluate pain pattern and bleeding pattern.

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5. To evaluate completeness of abortion and follow up.

3. Materials and Methods

It prospective observational study conducted at Government maternity hospital, Warangal district, Telangana region. Our expected sample size was 300 but we got only 120 cases. This study was conducted for a period of 6 months from the year 2019-2020. We have collected the data from case sheets, laboratory findings and also interviewing the patient to know the reason for termination. Inclusion criteria include Single intrauterine gestational age upto 24 weeks, MTP for social cause, missed abortion, Intrauterine deaths, contraceptive failure and exclusion criteria include single intrauterine gestational age > 24 weeks, ectopic pregnancy, twins (or) triplets, medical disorders, previous attempts to present pregnancy. Written Informed consent was taken from the patient. We analysed causes and treatment procedures for first and trimester termination. To determine efficacy rate of the treatment. All the collected data was analysed by Microsoft Excel. Our study results are given below in detail.

4. Results

According to our analysed data the results are as follow.

In Table 1 explains age distribution of patients in each group

Most of patients in misoprostol, mifepristone + misoprostol, D&C, Foley's groups were in age group of 20-30 years and in the Hysterotomy group were in the age group of 30-35 years.

84% were parous and 16% were unmarried pregnancies noted in mifepristone+misoprostol group, 90% were parous and 10% were unmarried pregnancies noted in D&C group. 80% were parous and 20% were unmarried pregnancies noted in Foley's catheter group. None of them were unmarried in misoprostol, hysterotomy group.

In present study 60% women were mifepristone + misoprostol alone group were in the GA range of 5 – 7 weeks, 38% women in misoprostol alone group in the gestational age range of 16-19 weeks, 80% women in D&C group were in the gestational age range of 8-11 weeks, 60% women in the Foley's catheter group in the gestational age range of 16-19 week, On the contrary 100% of women Hysterotomy group in the gestational age range of 20-24 weeks.

In my study 45% of women in all the groups belong to socioeconomic status III.

In this study 74% (36 patients) have induction abortion interval of 0-5 hrs in mifepristone+misoprostol group, 40% (20 patients) have induction abortion interval of 10-15 hours in misoprostol group, 75% (3 patients) have induction abortion interval of 15-20 hrs in Foley's catheter regimen.

Overall mifepristone+misoprostol have less IAI Of 0-5 hrs.

In this study the induction abortion interval between mifepristone and misoprostol is compared with that of misoprostol alone and Foley's catheter group it showed that the reduced interval in the mifepristone+ misoprostol group is significant.

In this study, in Primi the mean IAI between Mifepristone and Misoprostol combination is compared with that of Misoprostol alone and foley's catheter it showed the reduced interval in the mifepristone + Misoprostol group is significant.

In multi parous the mean IAI between mifepristone and Misoprostol combination is compared with that of Misoprostol alone, Foley's catheter group it showed that the reduced interval in the mifepristone+ Misoprostol group is significant.

In unmarried pregnancy the mean IAI between mifepristone and misoprostol combination is compared with that of Foley's catheter group it showed that the reduced interval in the mifepristone+ misoprostol group is significant.

In present study, first trimester induction abortion interval of mifepristone and misoprostol is compared with that of Misoprostol alone it showed that the reduced interval in the mifepristone+ misoprostol group is significant.

In second trimester the induction abortion interval of misoprostol compared with that of Foley's catheter group it showed that the reduced interval in the misoprostol group is significant.

In my study the most common pattern of pain in all the regimen was 1.

In present study the most common pattern of bleeding in all the regimen was 'B'.

In this study 9, 1 cases failed in the misoprostol and mifepristone+misoprostol group they undergone dilatation and curettage, 1 case failed in the Foley's catheter group undergone Hysterotomy.

In this study the most common side effect in all the regimens was abdominal cramps, chills was the most common side effect.

In my study, mifepristone +misoprostol, in medical methods and Dilatation and curettage in surgical methods have complete abortion rate in first trimester.

In my study misoprostol, in medical methods and Hysterotomy in surgical methods have complete abortion rate in second trimester.

In present study 3 routes of administration in all the groups, sublingual route has complete abortion rate higher than that of vaginal route and oral route.

In my study from all the methods mifepristone+misoprostol have high conception rate.

Table 1: Age

S.No	Age	MISO		MIFE+MISO		D&C		Hysterotomy		Foley's Catheter	
		No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
1	18-20	9	18%	8	16%	0	0%	0	0%	1	20%
2	21-25	20	40%	27	54%	5	50%	1	20%	3	60%
3	26-30	18	36%	9	18%	5	50%	2	40%	1	20%
4	31-35	2	4%	6	12%	0	0%	2	40%	0	0%
5	>35	1	2%	0	0%	0	0%	0	0%	0	0%
		50		50		10		5		5	

Table 2: Parity

S.No	Parity	MISO		MIFE+MISO		D&C		Hysterotomy		Foley's Catheter	
		No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
1	Unmarried	0	0%	8	16%	1	10%	0	0%	1	20%
2	Primi	22	44%	8	16%	3	30%	0	0%	0	0%
3	G2	22	44%	19	38%	3	30%	1	20%	2	40%
4	G3	5	10%	14	28%	2	20%	4	80%	2	40%
5	G4	1	2%	1	2%	1	10%	0	0%	0	0%
		50		50		10		5		5	

Table 3: Gestational age in weeks

S.No	GA(in weeks)	MISO		MIFE+MISO		D&C		Hysterotomy		Foley's catheter	
		No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
1	5-7	5	10%	30	60%	2	20%	0	0%	0	0%
2	8-11	6	12%	17	34%	8	80%	0	0%	0	0%
3	12-15	9	18%	3	6%	0	0%	0	0%	1	20%
4	16-19	19	38%	0	0%	0	0%	0	0%	3	60%
5	20-24	11	22%	0	0%	0	0%	5	100%	1	20%
		50		50		10		5		5	

Table 4: Socioeconomic status

SES	No. of cases	%
I	8	7%
II	33	28%
III	54	45%
IV	21	18%
V	4	3%
Total	120	100%

Table 5: Induction abortion interval

S.No	IAI(in hrs)	MISO		MIFE+MISO		Foley's Catheter	
		No. of cases	%	No. of cases	%	No. of cases	%
1	0-5	1	2%	37	74%	0	0%
2	5-10	14	28%	12	24%	0	0%
3	10-15	20	40%	1	2%	0	0%
4	15-20	12	24%	0	0%	3	75%
5	20-25	0	0%	0	0%	1	25%
6	25-30	3	6%	0	0%	0	0%
		50		50		4	

Table 6: Mean induction abortion interval

Group	No. of cases	Mean(in Hrs)	Minimum	Maximum
MISO	50	13.2	5.5	28
MIFE+MISO	50	4.9	3	11
Foley's	5	18.3	16	21.3

Table 7: Mean induction abortion interval based on parity

Parity	Mean(in Hrs)	MISO		MIFE+MISO			Foley's Catheter		
		Min.	Max.	Mean(in Hrs)	Min.	Max.	Mean(in Hrs)	Min.	Max.
Primi	12.1	6.0	20.2	4.7	3.0	6.0	0	0	0
Multi	14.1	5.5	28.0	5.1	3.0	11.0	19.1	16.0	21.3
UMP	0	0	0	4.8	3.2	7.5	16.0		
Total	13.2	5.5	28.0	4.9	3.0	11.0	18.3	16.0	21.3

Table 8: Mean induction abortion interval based on trimester

Trimester	MISO		MIFE+MISO		Foley's Catheter	
	Mean(in Hrs)		Mean(in Hrs)		Mean(in Hrs)	
First	15.0		4.9		0	
Second	12.5		0		18.3	

Table 9: Pattern of pain

S.No		MISO		MIFE+MISO		D&C		Hysterotomy		Foley's catheter	
		No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
1	0	21	42%	20	40%	2	20%	3	60%	0	0%
2	1	20	40%	21	42%	4	40%	2	40%	3	60%
3	2	9	18%	9	18%	4	40%	0	0%	2	40%
		50		50		10		5		5	

Table 10: Pattern of bleeding

S.No.		MISO		MIFE+MISO		D&C		Hysterotomy		Foley's Catheter	
		No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
1	A	13	26%	11	22%	2	20%	1	20%	3	60%
2	B	23	46%	30	60%	7	70%	4	80%	2	40%
3	C	14	28%	9	18%	1	10%	0	0%	0	0%
4	D	0	0%	0	0%	0	0%	0	0%	0	0%
		50		50		10		5		5	

Table 11: Alternative methods

S.No	Methods	MISO	MIFE+MISO	D&C	Hysterotomy	Foley's Catheter
1	D&C	9	1	0	0	0
2	Hysterotomy	0	0	0	0	1

5. Discussion

In this study 120 women were willing for the first and second trimester abortion. 50 women with misoprostol group and 50 women with mifepristone + misoprostol group and 10 women were undergone dilatation and curettage and 5 women undergone Hysterotomy and 5 patients with Foley's catheter.

5.1. Age

In my study, maximum number of women seeking for termination in the first and second trimester was found 76% of women in misoprostol group and 100% in dilatation and curettage were in the age group of 21-30 years. 54% of the women in mifepristone + misoprostol group were in the age group 21-25 years. 80% of women undergone Hysterotomy were in the age group 26-35 years. 60% of women in Foleys

Table 12: Side effects

S.No	SE	MISO		MIFE+MISO		D&C		Hysterotomy		Foley's catheter	
		No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
1	Abdominal cramps	8	14%	12	46%	2	17%	0	0%	3	60%
2	Chills	17	30%	5	19%	6	50%	0	0%	2	40%
3	Nausea	14	25%	2	8%	1	8%	0	0%	0	0%
4	Giddiness	2	4%	4	15%	1	8%	0	0%	0	0%
5	Vomiting	5	9%	0	0%	0	0%	0	0%	0	0%
6	Headache	2	4%	1	4%	1	8%	0	0%	0	0%
7	Fever	8	14%	2	8%	1	8%	0	0%	0	0%
8	Pain at suture line	0	0%	0	0%	0	0%	2	100%	0	0%

Table 13: Completeness of abortion in groups

Methods	MISO		MIFE+MISO		Foley's Catheter		D&C		Hysterotomy	
	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%	No. of cases	%
Failed	9	18%	1	2%	1	20%	0	0%	0	0%
Passed	41	82%	49	98%	4	80%	10	100%	5	100%
Total	50	100%	50	100%	5	100%	10	100%	5	100%

Table 14: Completeness of abortion based on trimesters

Methods	MISO		First Trimester MIFE+MISO		D&C	
	No. of cases	%	No. of cases	%	No. of cases	%
Passed	7	46.7%	49	98%	10	100%
Failed	8	53.3%	1	2%	0	0%
Total	15		50		10	

Table 15:

Methods	MISO		Second Trimester Foley's catheter		Hysterotomy	
	No. of cases	%	No. of cases	%	No. of cases	%
Passed	33	94.3%	4	80%	5	100%
Failed	2	5.7%	1	20%	0	0%
Total	35		5		5	

Table 16: Follow up and conception

Conception	MISO		MIFE+MISO	
	No. of cases	%	No. of cases	%
Yes	3	6%	9	18%
No	47	94%	41	82%
Total	50	100%	50	100%

catheter were in age group 21-25 year.

According to the study conducted by Gaurav Shyam Desai et al. 2016 used intracervical and intravaginal misoprostol for termination between the of 23-32 years.

According to Nasiya Mohamad AC (2018) study induction of abortion with mifepristone and oral or vaginal misoprostol during first trimester of pregnancy was 21-30 years.

5.2. Marital status

In my study 100% of women willing for both first and second trimester termination.

91.6% were married and 8.4% were unmarried in all the groups. 84% were parous and 16% were unmarried pregnancies noted in mifepristone+misoprostol group. 90% were parous and 10% were unmarried pregnancies noted in D&C group. 80% were parous and 20% were unmarried

pregnancies noted in Foley's catheter group. None of them were unmarried in misoprostol, Hysterotomy group.

5.3. Parity

In this study Most women in the study group were 88% of patient were P,G2 gravida in misoprostol group. 38% of patient were G2 gravida in mifepristone + misoprostol group. 60% of patient were P, G2 gravida in D&C group. 80% of patient were G3 gravida in Hysterotomy group. 80% of patient were G2,G3 gravida in Foley's catheter group.

Regarding parity in our study, there was a distribution of primigravida is 35.83% and multigravida patients in all the groups were 64.17%, most of the patients were multigravida.

The study done by Premila W. Ashok et al., in Nonsurgical midtrimester termination of pregnancy a review of 500 consecutive cases 51.8% were primigravida, 38.2% multigravida.

5.4. Socioeconomic status

In this study most women attending hospital belongs to marginalized group, hence 45% of women were SES of III which indicates lack of education made them unaware of methods of contraception approached for termination.

According to study conducted by nasiya mohamad AC study were SES of class IV and V.

1. Upper Class
2. Upper middle class
3. Middle class
4. Lower middle class
5. Lower class

Classification of SES according to Udai Pareek SES scale.

5.5. Period of gestation

In present study all pregnancies were chosen between 5-24 weeks after urine pregnancy test positive and confirmed by ultrasound.

Regarding mean gestational age in present study, misoprostol alone regimen was 15.5 weeks, the lowest gestational age was 7 weeks and maximum gestational age was 24 weeks. Mifepristone+misoprostol regimen was 7.2 weeks, the lowest gestational age was 5 weeks and maximum gestational age was 12 weeks. D&C regimen was 8.9 weeks, the lowest gestational age was 7 weeks and the maximum gestational age was 10 weeks. Hysterotomy regimen was 22.8 weeks, the lowest gestational age was 2 weeks and the maximum gestational age was 23 weeks. Foley's catheter regimen was 17.6 weeks, the lowest gestational age was 15 weeks and maximum gestational age was 20 weeks.

The mean gestational age in the study done by Carbonell et al., a randomized clinical trial in Vaginal vs. sublingual

misoprostol with mifepristone for cervical priming in 2nd trimester abortion by dilation and evacuation was 15.1±2 for misoprostol alone regimen.

Study conducted by Gaurav Shyam Desai et al., 2015 second trimester medical Termination of pregnancy with combined intracervical and intravaginal misoprostol comparative analysis with intravaginal misoprostol the mean gestational age of intravaginal misoprostol was 17.2±1.8.

Regarding the distribution of gestational age among the patients in our study are 37 out of 120 patients in gestation age range of 5–7 weeks. 31 out of 120 patients in gestation age range of 8–11 weeks. 13 out of 120 patients in gestation age range of 12–15 weeks. 22 out of 120 patients in gestation age range of 16–19 weeks. 17 out of 120 patients in gestation age range of 20–24 weeks.

Majority of the patients 19 out of 50 in misoprostol alone group were in the gestational age range of 16-19 weeks. 30 out of 50 in mifepristone + misoprostol alone group were in gestational age range of 5–7 weeks. 8 out of 10 in the D&C group were in gestational age range of 8-11 week. 5 out of 5 in Hysterotomy group were in the gestational age range of 20-24 weeks. 3 out of 5 in the Foley's catheter group were in gestational age range of 16-19 weeks.

Overall the majority were in gestational age range of 5-7 weeks,

5.6. Indication for MTP

Majority of cases were missed abortion, followed by the congenital anomalies, failed contraception and socioeconomic reasons.

Failure of contraceptive methods was seen in misoprostol groups. Failure of contraceptive method itself can result in unwanted pregnancy. No method is 100% effective.

5.7. Abortion interval

In present study Mean Induction Abortion Interval in misoprostol alone regimen was 13.2 hours, the minimum was 5.5 hours and maximum was 28.0 hours. Mifepristone + misoprostol regimen was 4.9 hours, minimum was 3 hours and maximum was 11.0 hours. Foley's catheter regimen was 18.3 hours, the minimum was 16.0 hours and maximum was 21.3 hours. Misoprostol alone regimen in primigravida was 12.1 hours, the minimum was 6.0 hours and maximum was 20.2 hours, in mifepristone + misoprostol regimen was 4.7 hours minimum was 3.0 hours and maximum was 6.0 hours.

Misoprostol alone regimen in multigravida was 14.1 hours, the minimum was 5.5 hours and maximum was 28.0 hours, In mifepristone + misoprostol regimen was 5.10 hours minimum was 3.0 hours and maximum was 11.0 hours, In foley's catheter regimen was 19.1 hours minimum was 16.0 hours and maximum was 21.3 hours. Mifepristone + misoprostol regimen in unmarried was 4.8

hours minimum was 3.2 hours and maximum was 7.5 hours. In foley's catheter regimen was 16.0 hour.

In the misoprostol alone regimen in first trimester was 15.0 hours, in mifepristone + misoprostol regimen was 4.9 hours. In the misoprostol alone regimen in second trimester was 12.5 hours, in the foley's catheter regimen was 18.3 hours.

Study conducted by H Hamoda et al., Study of mifepristone in combination with sublingual or vaginal misoprostol for medical termination of pregnancy up to 63 days gestation, The mean induction-to-abortion interval was 3.2 h (SD = 1.4) in the sublingual and 4.1 hr (SD = 1.5) in the vaginal group.

Study conducted by Grapsas X et al., 2008 misoprostol and first trimester pregnancy termination. The mean IAI was 5.9 +/- 1.7 hours (median 5.5 hours).

Study conducted by John K. Jain MD et al., 1996 comparison of misoprostol with and without laminaria tents for induction of second-trimester abortion. The mean interval from initiation of treatment to abortion was also similar, 15.7 hours in receiving misoprostol alone.

Study conducted by John K Jain MD et al., 1999 A comparison of two dosing regimens of intravaginal misoprostol for the second trimester pregnancy termination, mean abortion intervals 13.8 hrs.

Study conducted by Nagaria, T et al., Misoprostol Vs Mifepristone and Misoprostol in second trimester termination of pregnancy the induction-abortion interval of misoprostol in second trimester was 12.93+/-3.4 h.

Study conducted by Mohamed Fathalla et al. mean induction-abortion interval of Foleys catheter regimen was 13hrs.

5.8. Complete abortion

In present study complete abortion achieved in 41(82%) of 50 patients in the misoprostol alone regimen 9(18%) of patients have incomplete abortion and they undergone D&C. 49(98%) of 50 patients in mifepristone + misoprostol regimen, 1(2%) patients have incomplete abortion and they undergone D&C. 10(100%) of patients in Dilatation and curettage method. 5(100%) of patients in Hysterotomy method. 4(80%) of 5 patients in Foley's catheter method, 1(20%) of patients have incomplete abortion and they undergone Hysterotomy.

Complete abortion achieved in the First trimester was 7(46.7%) of 15 patients in misoprostol alone regimen, 49(98%) of 50 patients in mifepristone+misoprostol regimen, 10(100%) of 10 patients in D&C regimen. Second trimester was 33(94.3%) of 35 patients in misoprostol alone regimen, 4(80%) of 5 patients in Foley's catheter group, 5(100%) of 5 patients in Hysterotomy group.

Study conducted by H Hamoda et al., A study of the mifepristone in combination with the sublingual or vaginal misoprostol for medical termination of pregnancy up to 63

days gestation. Complete abortion occurred in 93 women (98.9%) in the sublingual and 51 women (96.2%) in the vaginal group.

Study conducted by Chelly Dalenda Najjar Lnes et al., 2010 Two medical abortion regimens for late first-trimester termination of pregnancy was 59(80.8%) women in mifepristone+misoprostol had complete abortion vs. 38 (77.4%) women in misoprostol group.

Study conducted by K. Joo Thong et al., 1992 induction of abortion with the mifepristone and misoprostol in early pregnancy 92 (93%) out of 99 women had complete abortion following administration of misoprostol.

Study conducted by Sushil Kumar et al., 2005 termination of pregnancy in first trimester - medical option the complete abortion achieved in misoprostol group were 29(83%) of 35 patients.

Study conducted by John K Jain MD et al., 1999 A comparison of two dosing regimens of intravaginal misoprostol for the second trimester pregnancy termination, the incidences of abortion within 48 hrs after initial administration of drug were 87.2% complete abortion rates 43.9%.

5.9. Side effects

In present study 32%, 44%, 20%, 60% and 20% of patients do not have any side effects in misoprostol alone regimen, mifepristone + misoprostol regimen, D&C, Hysterotomy, Foley's catheter methods respectively. 6% (34 patients) in misoprostol alone regimen experienced side effects, the most common are chills 30%, nausea 25%, followed by abdominal cramps 8%, vomiting 5%, fever 8%, headache 2%, giddiness 2%, 56% (28 patients) in the misoprostol + mifepristone regimen experienced side effects, the most common are abdominal cramps 46% followed by chills 19%, giddiness 15%, fever and nausea 8%. 80% (8 patients) in Dilatation and curettage group experienced side effects, the most common are chills. 50% abdominal cramps 17% followed by nausea, headache, fever. 40% (2 patients) in Hysterotomy group experienced side effects, the most common are pain at suture line 80% (4 patients) in Foley's catheter group experienced side effects, the most common are abdominal cramps 60% followed by chills.

Overall the most common side effect in all regimens was abdominal cramps, chills, nausea.

63.3% (76 patients) have side effects and 36.7% (44 patients) did not have any side effects from all the groups.

Study conducted by John K. Jain MD et al., Early pregnancy termination with intravaginally administered NaCl moistened misoprostol. Historical comparison with mifepristone and oral misoprostol, side effects were fever and chills, vomiting, diarrhea, and uterine pain

Study conducted by K. Joo Thong et al., 1992 Induction of abortion with the mifepristone and misoprostol in early pregnancy the common side effects are vomiting, diarrhea.

Study conducted by Nagaria, T et al., Misoprostol Vs Mifepristone and Misoprostol in second trimester termination of pregnancy the SE of misoprostol in second trimester was nausea, vomiting, fever, abdominal cramps.

5.10. Pattern of pain

In present study 82% of women in misoprostol, mifepristone + misoprostol group were pain pattern 0,1. 80% of women in dilatation and curettage group were pain pattern 1,2.100% of women in hysterotomy group were pain pattern 0,1.100% of women in foley's catheter group were pain pattern 1,2.

Over all the most common pattern of pain in all the regimen was 1.

Pattern of pain scale by K.A. Zikopoulos et al.,2002

0 = equal to menstruation

1 = stronger than menstruation but tolerable

2 = much stronger, inhibiting normal activities

5.11. Pattern of bleeding

In my study 46% of women in Misoprostol were bleeding pattern of B. 60% of women in mifepristone + misoprostol group were bleeding pattern of B. 70% of women in Dilatation and curettage group were bleeding pattern of B. 80% of women in Hysterotomy group were bleeding pattern B. 60% of women in Foley's catheter group were bleeding pattern A.

Over all the most common pattern of bleeding in all the regimen was 'B'.

Pattern of pain scale by K A Zikopoulos et al.,2002

A = Spotting

B = equal to menstrual flow

C = heavier than menstrual flow

D = heavy enough to cause patient anxiety

5.12. Route of administration

In present study comparing oral sublingual vaginal routes of administration in Misoprostol, mifepristone + misoprostol groups.

In oral group 60% (6 patients) have complete abortion in misoprostol group 50% (1 patients) have complete abortion in mifepristone + misoprostol group.

In vaginal group 86% (32 patients) have complete abortion in misoprostol group 100% (13 patients) have complete abortion in mifepristone + misoprostol group.

80% (4 patients) have complete abortion in foley's catheter regimen.

In sublingual group 100% (39 patients) have complete abortion in misoprostol, mifepristone + misoprostol group.

From all the 3 routes of administration in all the groups complete abortion rate of sublingual route was higher than that of vaginal route and oral route.

Similar to study conducted by Nautiyal Deepika et al. comparative study of misoprostol in first and second

trimester abortion by oral, vaginal and sublingual routes demonstrates that sublingual have high abortion rate than that of oral route.vaginal route has efficacy similar to sublingual route.

Study conducted by MD Pak Chung Ho et al., vaginal misoprostol compared with oral misoprostol in termination of second trimester concluded vaginal misoprostol is more effective than oral route.

5.13. Follow up and conception

In present study 6% (3 patients) women have conception in misoprostol group.18% (9 patients) women have conception in mifepristone + misoprostol group.

Other methods such as hysterotomy, D&C, Foleys catheter have no consumption.

Overall mifepristone + misoprostol group have high conception rate than other methods.

6. Conclusion

According to our study, in first trimester the mifepristone followed by the misoprostol is found to be more effective, has shorter induction abortion interval and have less side effects compared to misoprostol alone, D&C regimen.

In Second trimester the misoprostol is found to be more effective, has shorter induction abortion interval and lesser side effects compared to D&C, Foley's catheter, Hysterotomy regimens.

These procedures does not effect on conceiving rate of women.

7. Conflict of Interest

All authors have no conflict of interest.

8. Informed consent

Informed consent was obtained from all patients for being included in the study.

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Author biography

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