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THE STUDY ON COMBINATION OF MIFEPRISTONE AND MISOPROSTOL VS MISOPROSTOL MONOTHERAPY FOR MTP IN FIRST TRIMESTER : OBSERVATIONAL STUDY

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KEYWORDS :

INTRODUCTION

Miscarriage is a common adverse outcome of pregnancy[1,2], can result in physical complications like excessive bleeding, infection, as well as significant psychological distress such as anxiety, depression, and post-traumatic stress disorder. Subtypes of early pregnancy loss include anembryonic gestation and embryonic or fetal death, inevitable abortion, and incomplete abortion.[3,4] The management of first-trimester missed miscarriage offers three options: expectant, medical, or surgical intervention. Medical management involves the use of medications to facilitate the expulsion of retained pregnancy tissue.

AIMS AND OBJECTIVE

To evaluate the efficacy of adding mifepristone to the standard misoprostol treatment, concerning the complete evacuation of conception products from the uterus, patient satisfaction, as well as monitoring complications and side effects.

MATERIALS AND METHODS

- Study design- observational study.
- Study period- November 2023 to February 2024.
- The study population consisted of cases admitted to the inpatient department for first-trimester pregnancy termination.
- Women aged 18 years or older without underlying health conditions were considered eligible, if they had undergone an ultrasound confirming a viable intrauterine pregnancy between 5 and 14 completed weeks of gestation.
- Women with incomplete or inevitable abortion (defined as the absence of a gestational sac, an open cervical os, or both) were excluded from the study.
- The sample population was randomly divided into two groups.
- Group A received an oral dose of 200 milligrams (mg) of mifepristone followed by sublingual administration of 400 micrograms (mcg) of misoprostol every four hours until active labor was established or up to five doses were given.
- Group B received only 400 mcg of misoprostol sublingual every four hours until active labor was established or up to five doses were administered.
- The results were analysed.

OBSERVATION AND RESULTS

The study opted for a sample size of 30 individuals in each arm, totaling 60 participants in the study. Data were analyzed by using percentage, proportion, mean, SD, median, interquartile range to describe it, **Chi-square test** were applied to find out the significant differences between the two groups (at 95% CI where the level of significance is 0.05). Our trial demonstrated that administering mifepristone before misoprostol led to a higher rate of resolving missed miscarriages within 7 days compared to using misoprostol alone.

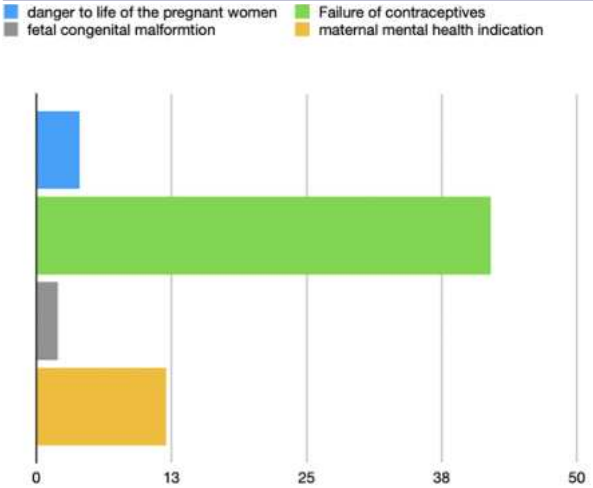
Outcome of the study and indication for termination of pregnancy depicted in the chart and graphs below.

DISCUSSION

Nowadays, the most commonly used regimen for medical abortion incorporates both mifepristone and misoprostol, reflecting a widespread adoption of this combination. Mifepristone is a 19-nor steroid that acts as a competitive progesterone-receptor antagonist and a glucocorticoid-receptor antagonist and primes the myometrium and cervix for prostaglandin activity.[5,6,7] This study concluded that individuals who received mifepristone experienced significantly fewer side effects compared to those who did not receive it. A similar study was conducted by Patel U et al[8] in Piparia, India amongst 50 cases, 25 in each group, using tablet misoprostol 200 mcg 6 hours apart and the induction abortion interval was found to be 18.94 hours among the women in the first group and 24.29 hours in the women who were in the second group, the difference being statistically significant. We suggest that women diagnosed with missed miscarriage should receive mifepristone pretreatment prior to misoprostol to improve the effectiveness of miscarriage management and reduce the necessity for surgical intervention.

OUTCOME OF THE STUDY

Outcomes		Mifepristone and Misoprostol (n=30)	Misoprostol alone(n=30)	P
Dosage of misoprostol required for complete expulsion (Mean SD)		2.84+-0.99	3.61+-1.62	0.024
Failed/ incomplete expulsion	Yes	2(6.66%)	4(13.3%)	0.640
	No	28(93.3%)	26(86.6%)	
Additional methods of evacuation	Yes	2(6.66%)	4(13.3%)	0.389
	No	28(93.3%)	26(86.6%)	
Side effects	Yes	10(33.3%)	10(33.3%)	0.010
	No	20(66.6%)	20(66.6%)	
Expulsion in 24 hrs		5(16.6%)	0	0.054
Expulsion in 12 hrs		23(76.6%)	26(86.6%)	0.317
Retained POC		2(6.66%)	4(13.3%)	0.052
Induction abortion interval (in hrs)median (IQR)		12.24(8.12-15.08)	14.32(9.43-17.30)	0.052



INDICATIONS FOR TERMINATION OF PREGNANCY

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