



Induction of Abortion with Mifepristone and Oral or Vaginal Misoprostol during First Trimester of Pregnancy

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Abstract

Abortion is the termination of pregnancy before the period of viability. The cut off as defined by WHO is gestational age before 20 weeks and foetal weight < 500g. The word Abortion derived from Latin word Aboriri -means to miscarry. From historical times,

- To compare the efficacy of oral with vaginal Misoprostol following 200mg of oral Mifepristone in first trimester MTP upto 9 weeks
- To compare the various parameters associated with both methods and to assess the most suitable safe method.
- The present study was carried out at Sree Balaji Medical College, Chrompet during academic year 2016 - 2017.
- In India where the Government has taken all steps to curtail the rate of illegal abortions, it still remains high and we as health professionals need to come up with effective methods for abortion, which is safe and simple. Though many methods are explained, there is no such method which is cent percent safe.

Keywords: Abortion; Mifepristone; Vaginal Misoprostol; Pregnancy

Introduction

Abortion is the termination of pregnancy before the period of viability. The cut off as defined by WHO is gestational age before 20 weeks and foetal weight < 500g. The word Abortion derived from Latin word Aboriri -means to miscarry. From historical times, termination of pregnancy was practiced with or without legal and social sanctions. MTP act can have an impact on reduction of maternal mortality and morbidity through safe abortion. Worldwide, about 46 million women have abortions each year, and about half of these procedures are illegal and considered "unsafe" by the World Health Organization. When applied to the most recent estimate of maternal death, this percentage corresponds to 67,000 deaths annually (World Health Organization 2001). Globally there is a ratio of one unsafe abortion for every seven live births (World Health Organization 1998).

Globally, 73% of abortions were done by married women in 2010 - 2014 compared with 27% done by unmarried women [1-3]. The risk of death from legal abortion is about 0.4/100000 induced abortions, whereas the maternal mortality is approximately 7 to 8/100000 live births. In India the mortality due to criminal abortion is 500/100000.

Unsafe abortion is a "procedure for terminating an unwanted pregnancy either by person lacking the necessary skills or in an environment lacking the minimal medical standards or both". Where abortion is legal, it is generally reasonably safe, where it is illegal, complications are common, and about 78,000 women die every year from these complications. Regardless of personal feelings about the ethics of interrupting pregnancy professionals have duty to know the medical facts about abortion and share them with their patients.

Global Abortion Scenario

Globally out of 210 million pregnancies, that occur each year, about 46 million (22%) end in induced abortion of which 20 million is estimated to be unsafe.

Majority of women are likely to have at least one abortion by the time they are 45 years. It is unfortunate and disheartening to note that inspite of liberalized abortion rules there is still one unsafe abortion for every 7 live birth.

Aim of the Study

- To compare the efficacy of oral with vaginal Misoprostol following 200 mg of oral Mifepristone in first trimester MTP upto 9 weeks.

- To compare the various parameters associated with both methods and to assess the most suitable safe method.

Material and Methods

The present study was carried out at Sree Balaji Medical College, Chrompet during academic year 2016 - 2017.

The purpose of study is to compare the efficacy of Mifepristone with vaginal Misoprostol combination OR Mifepristone with oral Misoprostol combination as a method of first trimester abortion.

This study was approved by the Ethical committee board.

Study design: Comparative Study, prospective study.

Study place: Sree Balaji Medical College, Chrompet, Chennai-44.

Study Population: Patients requesting MTP who attended family welfare/Department at Sree Balaji Medical College, Chrompet.

Sample size: 100 (Random Allocation to either of groups) 50 - Mifepristone + oral Misoprostol Group -1, 50 - Mifepristone +vaginal Misoprostol Group -2.nai-44.

Study Period: January 2016 - August 2017.

Year of Study: 2016 - 2017.

Inclusion Criteria

- Married women >18 years
- Parous, non-parous
- Intra uterine pregnancy
- Not sterilised
- Gestational age less than 9 weeks
- Uncomplicated
- Willing to participate

Exclusion Criteria

- Girls < 18 years
- Unmarried and widows
- Sterilised women
- Women in whom ectopic gestation is suspected (even clinically)
- Gestational age more than 9 weeks.

Results and Analysis

74% of the women group-1 and 76% of the women in group-2 were in the age group of 21 - 30 years.

In group-1, 46 patients (92%) were of second and third gravida. In group-2, 44 patients (88%) were of second and third gravida.

> 80% of women in both groups belong to Socio -economic status of IV/V.

S.NO	Age	Mifepristone+oral Misoprostol (Group-1)		Mifepristone+vaginal Misoprostol (Group -2)	
		No. of Cases	%	No. of Cases	%
1	18-20	3	6	4	8
2	21-25	22	44	20	40
3	26-30	15	30	18	36
4	> 30	10	20	8	16

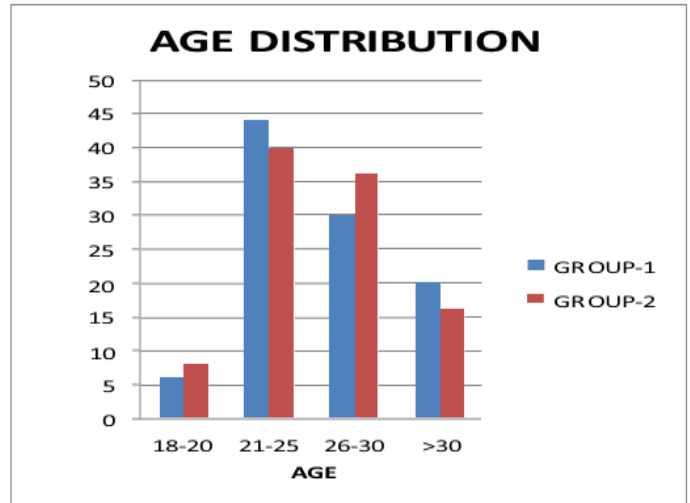


Table 1: Age.

S. No	Parity	Mifepristone+ Oral Misoprostol (Group-1)		Mifepristone+ Vaginal Misoprostol (Group-2)	
		No. of Cases	%	No. of Cases	%
1	G ₁	4	8	4	8
2	G ₂	38	76	36	72
3	G ₃	8	16	8	16
4	G ₄	-	0	2	4

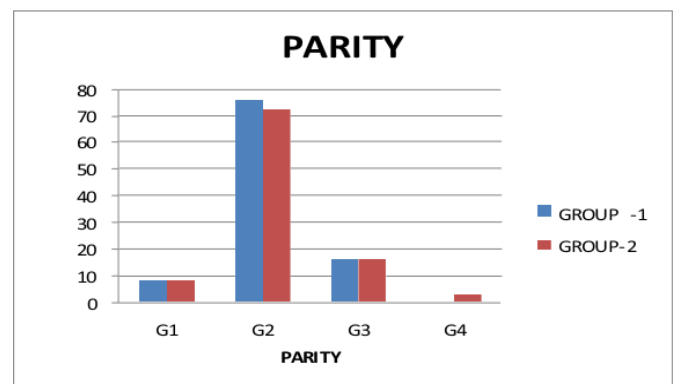


Table 2: Parity.

S. NO	Status	Mifepristone+ oral Misoprostol (Group-1)		Mifepristone+ vaginal Misoprostol (Group-2)	
		No. of cases	%	No. of Cases	%
1	Class I / II	0	0	2	4
2	Class III	6	12	8	16
3	Class IV/V	44	88	40	80

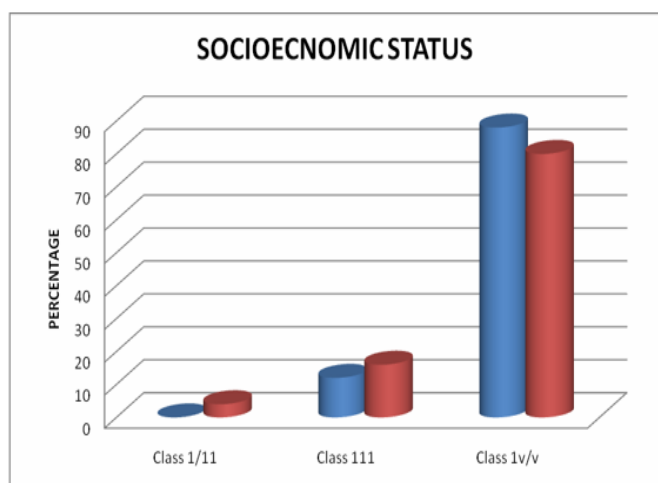


Table 3: Analysis of socio economic status.

Discussion

This study was conducted at Sree Balaji Medical College and Hospital during the period of 2016 - 2017. 100 Women wanting medical termination of pregnancy were included in this study. Mifepristone with misoprostol 800 micrograms orally and vaginally is compared and the outcome analyzed using various parameters. The results were subjected to statistical analysis using the ANOVA TEST -analysis of variance and chi-square test.

Looking at the age of women seeking MTP in the first trimester it was found that 74% of the women in group -1 and 76% of the women in group -2 were in the age group of 21 - 30 years (Table 1).

Looking at the parity of women seeking MTP in the first trimester it is found that more than 80% of patient were second gravida. 92% were of second and third gravida -group1 and 88% were of second and third gravida-group-2 (Table 2).

Most of the women attending our hospital belongs to the marginalized group, hence between 75 and 80% of women in both the groups were from socioeconomic status class of IV and V. socioeconomic status has no influence on the outcome (Table 3).

In my study all the pregnancies were chosen between 40 - 63 days after urine pregnancy test -positive and confirmed by ultrasonography.

In my study 94% had complete abortion and 3 cases had failure in vaginal group-2 and 86% had complete abortion and 7 cases had failure in oral group-1.

These results were similar to that of E Refaey, *et al.* who reported complete abortion rate to be 95% in vaginal instillation and 87% in oral administration of Misoprostol for first trimester MTP. This again shows complete abortion is more with vaginal administration than oral route. Peyron *et al.* [4] in a 1993 study with Mifepristone - Misoprostol combination reported 96.9% complete abortion with 0.8% incomplete abortion [5-9].

Summary

This is a comparative study of medical methods for first trimester abortion conducted at Sree Balaji Medical College, Chrompet, Chennai-44. The comparison between 800 µg oral OR vaginal 800 µg Misoprostol following mifepristone for first trimester MTP was done.

Our aim was to compare the various parameters involved in MTP in both the methods and to assess the most suitable method for first trimester MTP.

Here on Day 1 200 mg mifepristone was given orally followed by Day 3 800 µg misoprostol given orally/vaginally and observed for 4 hrs in op department.

Most of the patients were in the age group 21 - 30 years and of socioeconomic status of IV/V.

Expulsion was complete in the group 2 with percentage of 94% with only 3 cases of failure who needed check curettage for complete abortion. On the other hand group-1 had 86% complete abortion rate; 7 women needed check curettage for complete abortion.

Induction - abortion time is less in patients with mifepristone +vaginal misoprostol (group-2) than in patients with mifepristone +oral misoprostol (group-1).

Nausea was more common in group-1, Fever was more common in group-2, None of the patients needed blood transfusion.

None of them had delayed bleeding after 45 days. On an average bleeding stopped within 2 to 5 days of expelling products; Therefore Mifepristone + 800 µg vaginal/oral misoprostol combination is an effective outpatient procedure for early MTP.

Complete abortion rate is high with mifepristone and vaginal 800 µg misoprostol combination, similarly induction -abortion interval is less, and it has lesser complications.

Conclusion

In India where the Government has taken all steps to curtail the rate of illegal abortions, it still remains high and we as health professionals need to come up with effective methods for abortion, which is safe and simple. Though many methods are explained, there is no such method which is cent percent safe.

Our study has proved that mifepristone followed by oral with vaginal misoprostol is safe, simple, effective, method of abortion. The comparison of the vaginal route is more effective and safe, but with one drawback of decreased compliance because of the route of administration. Oral misoprostol, when compared is more compliant on basis of route of administration but has lesser effectiveness than vaginal route. So, good counseling of the client is important.

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