

USE OF VERY LOW DOSE MIFEPRISTONE AS EMERGENCY CONTRACEPTION IN THAI WOMEN: A PRELIMINARY REPORT

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ABSTRACT: The objectives of this study were to evaluate use of low dose mifepristone 10 mg in term of efficacy, bleeding patterns, side effects and satisfaction of Thai acceptors. There were 60 women who participated in the study. Their mean age was 31 ± 6.5 years. All of them were Buddhists and most of them finished secondary school or higher. Thirty six point seven percent of the women had not been pregnant, 60% had had a live birth and 30% had history of abortion. Most women had used oral pill in the past (76.7%). No pregnancies were occurred among clients. The pregnancy rate was 0%. Few had some side effects. There was no statistically difference in interval and duration of previous and treatment cycle. It was concluded that use of low dose mifepristone was effective, safe, and few side effects.

Keywords: Mifepristone, low dose, emergency contraception

INTRODUCTION: There were many randomized trials on mifepristone which have compared the efficacy and side-effects of different doses of mifepristone in emergency contraception (EC)¹⁻⁵⁾. These trials have been included in a systematic review on interventions for emergency contraception. The study of the World Health Organization on the efficacy of three doses of mifepristone (600, 50 and 10 mg) for emergency contraception was demonstrated no significant difference in proportions of pregnancies (1.3, 1.1 and 1.2% respectively)¹⁾. That study was concluded that lowering the dose of mifepristone 60-fold did not seem to decrease its effectiveness as an emergency contraceptive. Although there are many contraceptive methods in Thai women, use of mifepristone for emergency contraception does not implement in Thai women. Up to date, no study of very low dose mifepristone 10 mg for emergency contraception is conducted in Thai women. The objectives of this study were to evaluate efficacy, bleeding patterns, side effects and satisfaction of Thai acceptors. The outcome of this study would be the information for clients, providers and policy makers in family planning program to consider this emergency contraceptive method.

MATERIAL AND METHODS: Women who requested EC within 120 h (5 days) after a single act of

unprotected intercourse during the mid cycle period between 10th and 20th day of the current cycle were approached and screened for eligibility. The eligible criteria for subjects were required to be in good general health, willing to abstain from further acts of intercourse during that cycle or use a condom, willing and able to participate after the study had been explained and able to give informed consent and those who intended to continue with the pregnancy in case the treatment failed.

The exclusion criteria were women who were currently pregnant, or had a suspected pregnancy or did not have a pregnancy test done, those who used hormonal methods of contraception during the current cycle, had a contraindication to the use of mifepristone. The institutional review board of Chulalongkorn University Health Sciences Group approved the study protocol and informed consent documents.

At admission, we collected information on personal history, menstrual cycle, date of onset of last menstrual bleeding and expected date of onset of next menstrual bleeding, date and time of unprotected coitus, use of contraception during the current cycle and reason for requesting EC. Physical examination, pelvic examination, Pap smear, and pelvic ultrasonography were performed. Height and weight were measured and

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urine pregnancy test was performed. A 10-mg mifepristone tablet was swallowed in the presence of a member of the study team and the date and time when it was taken were recorded.

Women were given a diary chart to record vaginal spotting and bleeding, possible side effects and further acts of intercourse, if any, and the contraceptive methods used. A follow-up appointment was arranged about 7–10 days after the expected onset of the next menstruation. If no bleeding had occurred by that time, a urinary pregnancy test (hCG sensitivity 25 IU/L) was carried out. If the hCG assay was negative, a further follow-up visit 1 week later was arranged. In the event that the hCG assay was positive, an ultrasound examination was carried out to estimate the duration of gestation. Participants were followed-up until the occurrence of menses. However, they could be discontinued from the study if no bleeding had occurred 14–17 days after the expected onset of menses and the pregnancy test was negative.

The data were analyzed by using statistical package SPSS version 16. The study's primary outcome measure was the effectiveness of treatment in preventing pregnancy. Women lost to follow-up were excluded from the analysis. Efficacy was measured by calculating crude failure rates, percentage of pregnant women. The descriptive data were analyzed in term of percent, mean and standard deviation. The analytical statistic use was student's t-test. Numbers and percentages of subjects with side effects were calculated, along with their 95% CI.

RESULTS: A total of 60 women were recruited for the study from June to October 2008 at Family Clinic Chulalongkorn Hospital. The mean age of subject was 31 ± 6.5 years. All of them were Buddhists and most of them finished secondary school or higher. The characteristics of women who requested EC were shown in Table 1.

Thirty six point seven percent (36.7%) of the women had not been pregnant, 60% had had a live birth and 30% had history of abortion. Most women had used

oral pill in the past (76.7%). The previous contraceptive methods were demonstrated in Table 2. No pregnancies were occurred among clients. The pregnancy rate was 0%.

Side effects within the first week of treatment were mild and observed in very small proportion of women. The most common symptoms were nausea and vomiting, which occurred in 2 cases of the women. Other symptoms such as headache and irregular bleeding occurred only one case each. The details of side effects were shown in Table 3.

Data on the timing of the next menstrual period suggest a slight delay in onset. The mean duration of interval in previous cycle was 28.7 ± 4.3 days and the mean duration of bleeding days in previous cycle was 4.4 ± 1.3 days. However, the mean duration of interval

Table 1 The characteristics of subjects

Characteristics	Mean \pm SD
Age (year)	30 \pm 6.5
Weight (kg)	56.3 \pm 7.9
Height (cm)	158.6 \pm 4.4
Blood pressure	
Systolic (mmHg)	114.6 \pm 6.8
Diastolic (mmHg)	71.6 \pm 5.3
Previous live birth (N = 60 cases)	36 cases (60 %)
Previous abortion (N = 60 cases)	18 cases (30 %)
No pregnancy (N = 60 cases)	11 cases (36.7%)

Table 2 previous contraceptive uses

Contraceptive Method	Number	Percent
Oral pill	46	76.7
Implant	2	3.3
Intrauterine device	2	3.3
None	10	16.7
Total	60	100

Table 3 The side effects of mifepristone use

Side effect	Number (N = 60)	Percent
Nausea and vomiting	2	3.3
Headache	1	1.6
Irregular bleeding	1	1.6

in treatment cycle was 29.9 ± 4.6 days and the mean duration of bleeding day was 4.8 ± 1.5 days. There was no statistically difference in interval and duration of menstruation between previous and treatment cycle. The mean interval and duration of menstruation were shown in Table 4.

Considering the participant satisfaction and usage of low dose mifepristone, all were satisfied with this method and willing to use if it was marketed in Thailand. All of them would also recommend others to use this EC and prefer this pill to be sold over the counter.

DISCUSSION: There are many regimens of emergency contraception. Yuzpe, levonorgestrel, high dose and low dose mifepristone and intrauterine device are the methods of emergency contraception¹⁻⁵⁾. However, low dose of mifepristone is the most recent report of emergency contraception, particularly 10 mg⁵⁾. Many studies of low dose mifepristone demonstrated high effectiveness, safety and low side effects¹⁻⁵⁾. Nevertheless, up to date there are no studies in Thai women. The objective of the present study was to demonstrate the effectiveness, safety, side effects and satisfaction of 10 mg mifepristone used for EC in Thai women. The results of the study would be benefits for Thai women and be the information for Thai authority to consider this regimen to use as EC.

From the study, it was found that this contraceptive method was effective, safety and few side effects. These findings were similar to previous studies before. The studies of Cheng L, et al and Xiao B, et al were also demonstrated the effectiveness and safety of low dose mifepristone^{2,4)}. The WHO study demonstrated that low dose mifepristone was the same effectiveness as levonorgestrel¹⁾. These studies showed the effectiveness of low dose mifepristone the same as

high dose regimen in emergency contraception but had fewer side effects¹⁻⁵⁾. However, the women who were treated with low dose mifepristone had delayed menstruation¹⁻⁵⁾. This study was also demonstrated the delay of menstruation. The mean interval and duration of menstruation between previous and treatment cycle were different. The mean interval and duration of treatment cycle was slightly longer than previous cycle. This would be the effect of mifepristone use in treatment cycle. However, there was not statistically different. The finding was not corresponded with the study of Xiao B and others¹⁻⁵⁾. The explanation of this finding would be the different date of mifepristone intake in this study and the others.

In consideration of side effect, it was found that there were few side effects in using low dose mifepristone. Most of side effect was nausea and vomiting follow by irregular bleeding and headache. These side effects were the same as the studies from WHO, Hamoda H and Xiao B^{1,4,5)}. However, these side effects were mild and did not disrupt the use of emergency contraception. No adverse events or serious side effects were reported.

This study demonstrated the clients' satisfaction with low dose mifepristone. All were satisfied and willing to use this regimen. Moreover, they considered to advice others to use it. They preferred over the counter selling rather than prescription. These findings demonstrated the need of women in EC. In conclusion, low dose mifepristone was effective, safe and few side effects EC as well as preferable choice of Thai women. This study also further confirms that 10 mg mifepristone for EC is sufficient to prevent unwanted pregnancies among eligible clients and is a safe medication for EC in Thai women.

Table 4 Mean interval and duration of menstruation

Interval and duration	Previous cycle (Mean \pm SD)	Treatment + cycle (Mean \pm SD)	95 % CI
Interval (Days)	28.7 \pm 4.3	29.9 \pm 4.6	- 2.8, 0.4
Duration (Days)	4.4 \pm 1.3	4.8 \pm 1.5	- 0.9, 0.1

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การใช้ยาไมฟีพริสโตนขนาดต่ำในการคุมกำเนิดแบบฉุกเฉินในสตรีไทย: รายงานเบื้องต้น
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บทคัดย่อ: การศึกษาสตรีไทยที่ใช้ไมฟีพริสโตนขนาดต่ำ 10 มิลลิกรัม ในการคุมกำเนิดแบบฉุกเฉิน โดยมีวัตถุประสงค์เพื่อประเมินถึงประสิทธิภาพ ลักษณะระดู ผลข้างเคียง และความพึงพอใจในการใช้ยาดังกล่าวเพื่อคุมกำเนิดแบบฉุกเฉิน สตรีจำนวน 60 คน อายุเฉลี่ย 31 ± 6.5 ปี ทั้งหมดนับถือศาสนาพุทธ 36.7 % ยังไม่เคยตั้งครรภ์ 76.7 % เคยใช้ยาเม็ดคุมกำเนิดจากการศึกษาไม่พบที่มีการตั้งครรภ์ มีผลข้างเคียงต่ำ ระยะเวลาของระดู และระยะเวลาของการมีระดูไม่แตกต่างกันในรอบเดือนก่อนและรอบเดือนที่ใช้ยาไมฟีพริสโตน การศึกษานี้สรุปได้ว่าการใช้ยาไมฟีพริสโตนขนาดต่ำ 10 มิลลิกรัม เพื่อการคุมกำเนิดแบบฉุกเฉินมีประสิทธิภาพสูงปลอดภัย และผลข้างเคียงต่ำในสตรีไทย

คำสำคัญ: ไมฟีพริสโตน ขนาดต่ำ การคุมกำเนิดแบบฉุกเฉิน

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