Demographic Characteristics of Women with Self Use of Misoprostol for Pregnancy Interruption Attending Maharaj Nakorn Chiang Mai Hospital

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Abstract

Objective : To ascess the demographic characteristics of pregnant women and their partners including details of self use of misoprostol for pregnancy interruption.

Study design : Prospective descriptive study.

Setting : Department of Obstetrics and Gynecology, Maharaj Nakorn Chiang Mai Hospital.

Subjects : 103 pregnant women with self use of misoprostol for pregnancy interruption from June 1999 to June 2001.

Method : All subjects were interviewed use the same set of questionnaires.

Results : The mean age of the women and their partners were 20.81 ± 4.10 and 22.46 ± 5.05 years old respectively. The mean gestational age was 13.85 ± 5.37 weeks. The most common reason for pregnancy interruption was that they wanted to continue studying. The number of misoprostol tablets used ranged from 1-11 and 87.4 per cent of the women applied this drug *via* the vaginal route. The main source of drug purchasing was from friends, while the mean total cost was 663.16 ± 711.32 Baht. No major side effect was detected in the present study.

Conclusion : Misoprostol, the agent primarily used for gastric and duodenal ulcer prevention, is now used by pregnant women to interrupt their pregnancies. The present study is only the evidence reflecting the tip of the iceberg in this society, changing in sexual behavior, change in abortion techniques, and knowledge on contraception. Though major complications were not found in this study, misoprostol should not be considered safe, because several patients have encountered bleeding or incomplete abortion and required hospital stay.

Key word : Misoprostol, Pregnancy Interruption

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Life style and sexual behavior among the Thais is at present going through an over-whelming change. In the past, sex before marriage was not acceptable but the present situation has changed. A lot of young people have sex early, and many don't care much about contraception. Some of them are shy to seek a contraceptive method. So the consequence is unwanted pregnancy

Induced abortion in Thailand without court approval is still illegal. Due to this law, a lot of women suffer from an unplanned pregnancy. Eventhough it is illegal, there are many reasons to find a method for interruption.

There are several methods for pregnancy interruption such as uterine evacuation[1], modified condom balloon technique[2], intraamniotic hypertonic saline[3], and prostaglandins[3]. Most techniques require skillful personnel and a place to perform the procedure. The most commonly used method in the service clinic for early pregnancy is uterine evacuation. However, some women seek traditional methods such as abdominal massage[4], or herbal medicine for this purpose.

At present, misoprostol, PGE1 analog has been widely studied and established for labor induction[5] and pregnancy interruption[6,7]. It is a synthetic 15-deoxy-16-hydroxy-methyl analog of prostaglandin E_1 (PGE_1) primarily used to inhibit gastric acid secretion and prevent peptic ulcer in patients taking NASAIDS[8]. The use of misoprostol as an abortifacient, was first published in 1991 both in medical journals[9,10] and publiic magazines[11]. The knowledge of misoprostol spread widely to medical, and paramedical personnel including the general public making misoprostol one of the convenient methods for pregnancy interruption.

The authors have faced many women attending the hospital after self use of this drug with a variety of dosages for pregnancy interruption. This study was carried out to collect reliable and useful data about this group of women and their partners. It may be beneficial information concerning abortion in Thailand.

Table 1. Baseline characteristics of the women and their partners.

	Women No	%	Men No	%
Age				
10-15	3	2.9	2	1.9
16-20	57	55.3	36	35.0
21-25	36	35.8	48	46.6
26-30	4	3.9	10	9.7
31-35	1	1.0	4	3.9
36-40	2	1.9	1	1.0
>40	0		2	1.9
Occupation				
Unemployed	26	25.2	11	10.7
Student	39	37.9	33	32.0
Employee	26	25.2	28	27.2
Labourer	7	6.8	15	14.6
Private business	5	4.9	8	7.8
Government officer/state enterprise	0		3	2.9
Agriculture	0		2	1.9
Other	0		2	1.9
Unknown	0		1	1.0
Income (Baht/month)				
0	59	57.3	46	44.7
1-2,500	8	7.8	4	3.9
2,501-5,000	26	25.2	28	27.2
5,001-7,500	6	5.8	6	5.8
7,501-10,000	2	1.9	6	5.8
10,001-12,500	0		2	1.9
12,501-15,000	1	1.0	1	1.0
>15,000	0		2	1.9
Missing/unknown	1	1.0	8	7.8

SUBJECTS AND METHOD

103 pregnant women with a history of self use of misoprostol for the purpose of pregnancy interruption attending the Department of Obstetrics and Gynecology, Maharaj Nakorn Chiang Mai Hospital from June 1999 to June 2001 were recruited in a prospective descriptive study. They came to the hospital with either one or more of these symptom(s) and sign(s) such as bleeding per vagina, abdominal pain, fever, chill, diarrhea, nausea, vomiting, abortion (inevitable/incomplete/complete) or premature labor. After intervention by an attending physician based on the condition of the patients and if all conditions were stable, intensive and private interview was done by the investigator. Data included reproductive history, contraceptive practice, socioeconomic circumstances of the patients and partners and details related to misoprostol use. Most of the patients ended up with complete abortion while the remainder continued the pregnancy.

RESULTS

The mean age ± SD (range) of women and their partners were 20.81 ± 4.10 (14-38) and 22.46 ±

Table 2. Demographic characteristics of the women.

	No	%
Marital status		
Single (living alone)	17	16.5
Married	7	6.8
Divorced/widowed	6	5.8
Cohabiting	73	70.9
Parity		
0	63	61.2
1	29	28.2
2	8	7.8
3	3	2.9
Gestational age (wk) on admission		
6-10	34	33.0
11-15	33	32.0
16-20	25	24.3
21-25	9	8.7
26-30	1	1.0
>30	1	1.0
Diagnosis of the present pregnancy		
Incomplete/Inevitable/Complete abortion, premature labor	88	85.4
Septic abortion	14	13.6
Ectopic pregnancy (ruptured)	1	1.0
Contraceptive method		
No contraception	40	38.8
Inconsistently used	56	54.4
Consistently used	7	6.8
Age of first intercourse		
13	1	1.0
14	5	4.9
15	6	5.8
16	12	11.7
17	18	17.5
18	8	7.8
19	21	20.4
20	11	10.7
21	9	8.7
22	3	2.9
23	4	3.9
24	2	1.9
25	1	1.0
27	1	1.0
28	1	1.0

5.05 (15-45) years old respectively. Most women were in the age group of 16-20, while most men were in the age group of 21-25. Nearly 38 per cent of the patients and 32 per cent of partners were students (including school and university). Ten women were studying in universities (1 for a Master degree, 9 for a Bachelor degree). Eight men were studying in universities (1 for a Master degree, 7 for a Bachelor degree.) Concerning income, 57.3 and 44.7 per cent of the women and men respectively had no income. These data are presented in Table 1.

Table 2 shows the characteristics of the women. The most common marital status was cohabiting (70.9%). 61.2 per cent were in the first gravida with the mean gestational age ± SD (range) of 13.85 ± 5.37 weeks (6-33). 38.8 per cent had never used any method of contraception.

The most important reason for pregnancy interruption was that they wanted to continue studying at that time or in the future. The number of misoprostol tablets used ranged from 1-11 but most of them (76.6%) used the medicine only one time before coming to the hospital. 87.4 per cent applied this drug *via* the vaginal route. The mean total cost of misoprostol was 663.16 ± 711.32 Baht (40-4400) calculated from only 88 persons while the rest did not know the price because their partner or friends gave them the medication. The source of drug purchasing was from a friend, not from a physician but the most important person who influenced the decision for pregnancy interruption was the partner. These data are shown in Table 3.

Table 4 shows the detected side effects of misoprostol. Only minor side effects such as chill, fever, nausea, vomiting and diarrhea were found. No serious complication such as uterine rupture was found.

DISCUSSION

Abortion without court approval in Thailand has been a debate and sensitive issue for a long time. Because it is illegal, the precise incidence and place which provides this service can not be obtained. The present study reflects only some viewpoints of the social problem related to pregnancy in Thailand. However, the authors believe that the real incidence is much higher. Some women with unwanted pregnancy go to private clinics, while some decide to use misoprostol or other methods.

Comparing misoprostol to other methods, misoprostol is more convenient because it is an over the counter drug which can be bought without a prescription. Moreover, it is inexpensive (the real cost is only 11 Baht per 200 mcg tablet). But the cost purchase in this study was higher since the seller knew the underlying reason for using this agent.

After self administration of misoprostol, women may stay at home with the end result of complete abortion or failed abortion without serious complication. However, some of them go to a hospital with sign (s)/symptom (s) related to abortion or complication. So there is no data of how many users require medical care. At present, the correct prevalence of failure after misoprostol use for pregnancy interruption is not known. Among 803 control women in Costa's study in Brazil who delivered at term[12], 6 per cent had taken misoprostol unsuccessfully and 5 per cent had taken an unidentified drug that could have been misoprostol. So as many as 11 per cent of women were exposed to misoprostol during pregnancy.

Despite the small numbers in the present study, it appears that misoprostol is quite effective and rather safe. The present study shows that misoprostol's complications are less severe than other invasive methods for abortion and less than the authors expected. However the authors could can not confirm whether it will be safe for every case since the dose usage is highly variable and also there is a difference of uterine sensitivity. So the authors suggest that it should not be used generally without indication and intensive medical and obstetric care. Costa[12] showed that misoprostol had a lower morbidity than catheter insertion or other methods but 3 deaths were recorded in the study hospitals (in Brazil) among women who had reportedly used misoprostol (2 sepsis, 1 ruptured uterus). Moreover, fetal malformation with fetuses exposed to misoprostol *in utero* is still doubtful[13,14].

Although a high prevalence of users were teenagers who were students and unemployed demonstrates that they might lack knowledge about contraception while they have a tendency to have sex earlier, it reflects only a small part of this social problem. These groups of women may not be different from the general population who need pregnancy interruption. Except from pregnancy, physicians should be concerned about STD especially in cases with unstable relationships or cases without sexual monogamy in their youth.

This study shows a change of the method used for pregnancy interruption in Thailand and it may arouse the way to solve the problem. Although

Table 3. Details related to pregnancy interruption.

	No	%
The most important reason for pregnancy interruption		
Want to continue education	52	50.5
Can not marry	20	19.4
Financial problem	20	19.4
No responsibility from men	3	2.9
Failure of contraception	2	1.9
Have enough children	2	2.0
Fetal anomaly	1	1.0
Other	3	2.9
Method used for pregnancy interruption		
Misoprostol alone	80	77.7
Misoprostol + other	23	22.3
Number of misoprostol tablets used (200 mcg/tablet)		
Unknown (women could not recall)	2	1.94
1	7	6.8
2	26	25.2
3	23	22.3
4	27	22.3
5	8	7.8
6	4	3.9
7	3	3.0
8	1	1.0
9	1	1.0
11	1	1.0
Frequency of misoprostol use		
1	79	76.6
2	18	17.5
3	5	4.9
6	1	1.0
Route of misoprostol administration		
Oral	7	6.8
Vaginal	90	87.4
Oral plus vaginal	6	5.8
Source of misoprostol purchasing		
Friends	71	68.9
Pharmacy	21	20.4
Clinic	2	1.9
Other	5	4.9
Unknown + Missing	4	3.9
The person who advised misoprostol use		
Friend	78	75.7
Partner/husband	7	6.8
Parent	1	1.0
Doctor/nurse	1	1.0
Paramedical personnel	3	2.9
Relative	3	2.9
Brother/sister	3	2.9
Other	7	6.8
The first person who was informed by the women about the pregnancy		
Partner/husband	89	86.41
Parent	2	1.94
Friend	2	1.94
Relative	1	0.97
Nobody	9	8.74
The most important person to influence the decision of pregnancy interruption		
Herself	39	37.9
Partner/husband	51	49.5
Parent	10	9.7
Brother/sister	2	91.9
Missing	1	1.0

Table 4. Detectable side effects of misoprostol.

	No	%
Fever	26	25.2
Chill	33	32.0
Nausea	13	12.6
Vomiting	14	13.6
Diarrhea	23	22.3

this study does not represent the real situation of abortion practice in this society, at least it reflects the changing sex behavior and technique of induced abortion. Moreover, this is further evidence of contraception failure in our society, evidence of free use of illegal drugs for abortion purposes. The authors have almost never seen new cases of incomplete or septic abortion related to the old methods such as evacuation and curettage, hypertonic solution or other chemicals in recent years. It seems that misoprostol is replacing all other techniques for induced abortion. This paper suggests that there is a need for more proper sex education, proper control of misoprostol use, further knowledge of contraception and misoprostol must be the abortion method of most concern at the present time.

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ข้อมูลพื้นฐานทั่วไปของสตรีตั้งครรภ์ที่ใช้มีโสพรอสตอลด้วยตนเองเพื่อยุติการตั้งครรภ์ที่มาโรงพยาบาลมหาราชนครเชียงใหม่

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วัตถุประสงค์ : เพื่อประเมินข้อมูลพื้นฐานของสตรีตั้งครรภ์และสามี/เพื่อนชาย รวมทั้งรายละเอียดของการใช้มีโสพรอสตอลเพื่อยุติการตั้งครรภ์ด้วยตนเอง

ประเภทการศึกษา : การศึกษาไปข้างหน้าเชิงพรรณา

สถานที่ศึกษา : ภาควิชาสูติศาสตร์และนรีเวชวิทยา โรงพยาบาลมหาราชนครเชียงใหม่

ประชากร : สตรีตั้งครรภ์ 103 รายที่ใช้มีโสพรอสตอลด้วยตนเองเพื่อยุติการตั้งครรภ์ ที่มารับการรักษาต่อในโรงพยาบาลมหาราชนครเชียงใหม่ ตั้งแต่มิถุนายน 2542 - มิถุนายน 2544

วิธีการศึกษา : สตรีตั้งครรภ์ทุกคนที่ได้รับการสัมภาษณ์โดยผู้ทำวิจัย โดยใช้แบบสอบถามที่จัดทำขึ้นมา

ผลการศึกษา : อายุเฉลี่ยของสตรีตั้งครรภ์และคู่นอน 20.81± 4.10 ปีและ 22.46 ± 5.05 ปี ตามลำดับ อายุครรภ์เฉลี่ย 13.83 ± 5.37 สัปดาห์ กว่าร้อยละ 80 มาด้วยปัญหาแท้งไม่ครบ เหตุผลสำคัญที่สุดของการเลือกยุติการตั้งครรภ์ คือ สตรีตั้งครรภ์ที่มีความประสงค์ที่จะทำการศึกษาต่อ จำนวนเม็ดของมีโสพรอสตอลที่ใช้คือ 1-11 เม็ด โดยร้อยละ 87.4 เลือกใช้ยาทางช่องคลอดและแหล่งหลักของการได้ยาคือจากเพื่อน ราคาเฉลี่ยของยาที่ซื้อขาย 663.16 ± 711.32 บาท ไม่พบมีผลข้างเคียงอันตรายอื่น ๆ จากการใช้ยานี้

สรุปผล : มีโสพรอสตอลซึ่งเป็นยาป้องกันแผลในกระเพาะอาหารและลำไส้ มีการนำมาใช้ด้วยตนเองเพื่อยุติการตั้งครรภ์ที่ไม่พึงปรารถนาอย่างกว้างขวาง ผู้ใช้ส่วนใหญ่เป็นกลุ่มอายุน้อย อยู่ในวัยเรียน ถึงแม้ว่ารายงานนี้ไม่พบภาวะแทรกซ้อนอันตรายร้ายแรงจากการใช้ยานี้ แต่ก็ยังนับว่ามีอันตรายจากการตกเลือดตามมาจนต้องเข้ารับการรักษาในโรงพยาบาลเป็นจำนวนมาก รายงานนี้สะท้อนปัญหาการตั้งครรภ์ที่ไม่พึงประสงค์ ความล้มเหลวของการวางแผนครอบครัว ตลอดจนการเปลี่ยนแปลงด้านวัฒนธรรมการมีเพศสัมพันธ์ในวัยที่ไม่พร้อม

คำสำคัญ : มีโสพรอสตอล, การยุติการตั้งครรภ์

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