# THE INFORMATION AND APPLICATIONS OF THE MARRIED WOMEN LIVING IN ODEMIS RELATING TO MEDICAL AND TRADITIONAL EMERGENCY CONTRACEPTION

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#### **SUMMARY**

**Objectives:** The present study was designed to determine medical and traditional information and applications of emergency contraception among married women after unprotected sexual intercourse.

Materials and methods: The present study was carried out as a descriptive study on 367 married women registered to Primary Health Center number one in Odemis County of Izmir City between the dates 12.05.2005 and 20.06.2005. The data were collected through a questionnaire consisting of characteristic descriptive, reproductive data and information and use of medical and traditional emergency contraception. For collecting data, face-to-face interview technique was used. Data were evaluated by as number, percentage and chi-square tests on the SPSS version 12.0. Results: It was found that 25.1% of the women knew medical methods of emergency contraception and 1.4% of them (n = 5) used morning after pills. It was also found that 50.1% of the women knew at least one traditional method for emergency contraception and 19.3% of them used traditional applications at least for one time, and the most frequently used traditional applications was vaginal douche with rate of 75.7%.

**Conclusions:** It was concluded that rate of having knowledge on and using medical emergency contraceptive methods was lower for contraception from unintended pregnancies whereas rate of having information and using traditional methods was higher among married women in Odemis. The women should be informed on emergency contraceptive methods and they should be given counselling.

Key words: emergency contraception, traditional applications, vaginal douche, unintended pregnancy

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## ÖDEMİŞ BÖLGESİNDEKİ EVLİ KADINLARIN TIBBİ VE GELENEKSEL ACİL KONTRASEPSİYONA İLİŞKİN BİLGİ VE UYGULAMALARI

### ÖZET

Amaç: Bu araştırma, evli kadınların korunmasız cinsel ilişki sonrası acil kontrasepsiyona ilişkin tıbbi ve geleneksel bilgi ve uygulamalarını saptamak amacıyla planlanmıştır.

Gereç ve yöntemler: Araştırma 12.05.2005- 20.06.2005 tarihleri arasında İzmir/Ödemiş ilç esi 1. No'lu Sağlık Ocağına kayıtlı 15-49 yaş arası 367 evli kadın ile tanımlayıcı olarak yapılmıştır. Veriler tanıtıcı özellikleri, doğurganlık özelliklerini, tıbbi ve geleneksel acil kontrasepsiyona ilişkin bilgi ve uygulamaları iç eren sorulardan oluşan soru formu ile toplanmıştır. Verilerin toplanmasında yüz yüze görüşme tekniği kullanılmıştır. Araştırma verileri SPSS 12.0 paket programında sayı, yüzde ve ki-kare testi kullanılarak değerlendirilmiştir.

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**Bulgular:** Kadınların %25.1'inin tıbbi acil kontrasepsiyon yöntemlerini bildiği, %1.4'nün ise (5 kişi) ertesi gün hapını kullandığı saptanmıştır. Kadınların gebelikten korunmak için %50.1'inin en az bir geleneksel uygulama bildiği ve %19.3'nün en az bir kez geleneksel uygulama kullandığı, en fazla kullanılan geleneksel uygulamanın ise %75.7 ile vajinal duş olduğu saptanmıştır.

Sonuç: Ödemiş bölgesindeki evli kadınlarda istenmeyen gebeliklerden korunmak için tıbbi acil kontrasepsiyon bilgi ve kullanım oranının düşük, buna karşılık geleneksel uygulama bilgi ve kullanım oranının daha yüksek olduğu belirlenmiştir. Kadınlar arasında acil kontrasepsiyon yöntemler hakkında bilgilendirmenin ve danışmanlık hizmetinin yaygınlaştırılması gerekmektedir.

Anahtar kelimeler: acil kontrasepsiyon, geleneksel uygulamalar, istenmeyen gebelik, vajinal duş Türk Jinekoloji ve Obstetrik Derneği Dergisi, (J Turk Soc Obstet Gynecol), 2013; Cilt: 10, Sayı: 2, Sayfa: 90-6

#### INTRODUCTION

Emergency contraception (EC) is defined as the prevention of pregnancy prior to the implantation period of a potential unwanted pregnancy following an un protected sexual intercourse<sup>(1,2,3)</sup>. Not every sexual intercourse may present an expected and planned condition. Couples may encounter a risk of undesirable pregnancy in relation to an unplanned sexual intercourse if no contraceptive measures have been taken. There is a high risk of pregnancy up to 25% depending on how close the intercourse is to the period of ovulation, even in a single case of unprotected intercourse. Consequently, unintended pregnancies occur, which damage the woman health seriously, including unsafe abortion and deaths<sup>(1,3,4)</sup>. Based on the World Health Organization (WHO) reports, at least 20 millions of unsafe abortus caused by unintended pregnancies occur annually, of which 80.000 lead to the death of the woman<sup>(5)</sup>. 2-3%of the women terminate their pregnancy via induced abortion annually, while only 1% can prevent their pregnancy using EC methods<sup>(6)</sup>.

EC methods are of greater importance in countries where the modern contraception methods are not adequately performed. Turkey is also among these countries with a low rate for the use of modern contraception methods and a high curettage rate<sup>(1,4)</sup>. EC is considered an effective and an inexpensive method for preventing the unintended pregnancies that damage the woman health seriously<sup>(4,6)</sup>.

Following unprotected sexual intercourse, several methods including hormonal pills, intra-uterine device and mifepristone are being used for emergency contraception. Contraceptive pills which are also referred to as morning after pills are among the most common methods and received within 72 hours of the sexual intercourse with

the dosing repeated after 12 hours<sup>(6,7)</sup>. The morning after pill is a pill that contains the combination of estrogen and progesterone or progesterone alone. When used accurately, it provides a protection between 75% and 98%<sup>(5,7,8)</sup>. In Turkey, the morning after pills used for EC are available without prescription. Maternal and pediatric health and family planning service is provided for free at the family health centers<sup>(4,7)</sup>. Another method is the administration of copper IUDs within 5-7 days of sexual intercourse. This is one of the most effective EC methods with a failure rate of 0.01% reported<sup>(6)</sup>. Another effective method used for EC is mifeprisone, a progesterone antagonist (RU486). However, this agent is not available in our country<sup>(7)</sup>.

Women without any information on EC, who have unprotected sexual intercourse or do not practice effective methods of contraception resort to traditional methods they are familiar with $^{(4,9)}$ . Despite its nonestablished efficacy, several postcoital contraception methods are employed worldwide<sup>(10)</sup>. Pregnancy is trying to be prevented by these following methods after sexual intercourse: application of herbs (vitamin C/lemon juice, pepper, cabbage, parsley etc), aspirin, coca-cola, soap, insertion of chicken feather, sewing needles, sharp-edged rods, making body movements that push the semen to flow out, coughing and vaginal douching<sup>(9-11)</sup>. Vaginal douching (VD) is a common traditional method that is used worldwide and particularly in developing countries. EC offers an effective choice for preventing undesirable pregnancies instead of these traditional methods that are very risky for the woman health(9,11).

This trial was performed to determine the medical and traditional information and the applications of married women of child-bearing potential for avoiding unintended pregnancies.

#### MATERIAL AND METHOD

This trial was performed as a descriptive study among married women in the age range of 15 to 49, who are registered at the Odemis /Izmir Primary Health Care Center no 1 between 12.05.2005 and 10.06.2005 date. The study sample consisted of 367 women selected via randomized sampling method among 4402 married women registered at the Primary Health Care Center no 1. Data were collected via survey forms using a face to face interview technique. The data were assessed by SPSS 12.0 package software; numbers and percentage distributions were used for descriptive statistics with chi-square test used for correlative analysis.

#### **ETHICS**

For the investigation to be conducted among the women registered at the Primary Health Care Center no 1, consent was obtained from the Odemis Health Group Presidency and the Ege University Odemis Health School Scientific Ethical Committee. The women participating in the trial were given information on the trial and gave verbal consent.

#### RESULTS

The descriptive characteristics of the women participating in the trial are presented in Table I. The mean age of the women was 32.92(7.54 years. 60.5% were primary school graduates, 79.6% were not employed, 65.5% perceived their income to be at a moderate level; the mean number of pregnancies was  $3.29 \pm 1.13$ , 25.8%of the women had undergone curettage at least once by their own will, 50.6% had not planned their pregnancy, 71.4% used an effective family planning (FP) method, 11.7% became pregnant while using an FP method. The distribution of the women's status of information on and applications for EC is presented in Table II. 25.1% of the women were familiar with the EC methods, 87% knew about the morning after pills and 1.4% were detected to have used these pills. 40.3% of the women received information on EC methods through the media and internet while 36.9% obtained information from the health care providers (midwifes, nurses, doctors), respectively and 8.2% the site of EC, respectively and 8.2% from the EC receives information about the methods indicated that family planning counseling.

Table I: Descriptive characteristics of women.

Characteristics	Frequency (n)	Percent (%)			
Ağe of women (years) (n=367)					
30 years and under	160	43.6			
31 years and over	207	56.4			
<b>Education status</b>					
Literate	14	3.8			
Primary school	222	60.5			
High school	83	22.6			
University	48	13.1			
Employment status					
Employed	75	20.4			
Unemployed	292	79.6			
Income status					
Bad	86	23.4			
Middle	240	65.4			
Good	41	11.2			
Number of pregnancy					
None	18	4.9			
1-2	199	54.2			
3 and over	150	40.9			
Number of curettage (n=3	49*)				
None	259	74.2			
At least one or more	90	25.8			
Planning of the pregnancies					
None	18	4.9			
Planned pregnancy	163	44.4			
Unplanned pregnancy	186	50.7			
Family planning (FP) method					
No method	43	11.7			
Effective FP method a	262	71.4			
İneffective FP method b	62	16.9			
Became pregnant while us	sing an FP method	(n=324)			
Yes	38	11.7			
No	286	88.3			

<sup>(\*</sup> non-pregnant women are not included)

**Table II:** The distribution of the women's status of information on and applications for emergency contraception (EC).

and applications for emergency contraception (Ee).				
Characteristics	n	%		
Information of EC (n=367)				
Known	92	25.1		
Unknown	275	74.9		
Known EC methods (n=92)				
Morning after pills	80	87.0		
Intrauterine device (IUDs)	12	13.0		
Use of EC (n=367)				
Used (Morning after pills)	5	1.4		
Unused	362	98.6		
Source of information EC (n=	92)			
Media and internet	37	40.3		
Health care providers (midife, nurs	se, doctor) 34	36.9		
Friends	13	14.1		
Pharmacy	8	8.7		
Receive of the EC counseling from the FP counseling				
services (n=367)				
Yes	30	8.2		
No	337	91.8		

<sup>(&</sup>lt;sup>a</sup> Effective FP method (intrauterine contraceptive device (IUCD), hormonal contraceptives, condom, surgical sterilization)

<sup>(</sup>b Ineffective FP method (withdrawal, determine the fertile days, breast-feeding)

The distribution of the women's traditional information on and applications for EC is presented in Table III. 50.1% of the participating women were familiar with at least one traditional method with the most known practices being the vaginal douching (59.4%) and injections for inducing abortion (21.3%). 19.3% of the women were detected to use at least one traditional method while 75.7% used the method of vaginal douching; 41.3% of the women learnt these traditional practices from the elder family members and 39.7% learnt them from their friends.

**Table III:** The distribution of the women's traditional information on and applications for emergency contraceptions.

Characteristics	n	%		
Information of traditional method fo	r EC (n=367	)		
Known	184	50.1		
Unknown	183	49.9		
Known traditional applications for E	C (n=202*)			
Vaginal douching	120	59.4		
Injections for inducing abortion	43	21.3		
To intervene in the vagina <sup>a</sup>	20	9.9		
Compulsive body movements <sup>b</sup>	12	5.9		
To take oral drug, the liquid and				
solid foods <sup>c</sup>	7	3.5		
Use of traditional methods (n=367)				
Used	71	19.3		
Unused	296	80.7		
Used of traditional methods (n=82*)				
Vaginal douching	62	75.7		
Compulsive body movements <sup>b</sup>	8	9.7		
Injections for inducing abortion	6	7.3		
To take oral drug	12	6.5		
Source of information traditional me	Source of information traditional methods (n=184)			
Older family members	76	41.3		
Friends	73	39.7		
Health care providers				
(midwife, nurse, doctor)	23	12.5		
Others (TV, newspapers, magazines etc.)	12	6.5		

<sup>(\*</sup> women gave responses to multiple choices and the percentages were obtained based on the number of the responses given).

Comparing the status of information on EC and the descriptive characteristics, a statistically significant difference was detected between the EC information status by educational status, employment status, income status, number of pregnancies, planning of the pregnancies and the use of EC methods (p<0.05) (Table IV).

**Table IV:** Comparing the status of information on emergency contraception and the descriptive characteristics.

VARIABLES	Information of EC (n=367)			
	Known	Unknown	Statistics	
Age of women (years)	n %	n %	P* values	
30 years and under	50 (31.2)	110 (68.8)	.021	
31 years and over	42 (20.3)	165 (79.7)		
<b>Education status</b>				
Primary school and under	32 (13.6)	204 (86.4)	< 0.01	
High school	21 (25.3)	62 (74.7)		
University	39 (81.2)	9 (18.8)		
<b>Employment status</b>				
Employed	33 (44.0)	42 (56.0)	< 0.01	
Unemployed	59 (20.2)	233 (79.8)		
Income status				
Bad	12 (14.0)	74 (86.0)	.022	
Middle	67 (27.9)	173 (72.1)		
Good	13 (31.7)	28 (68.3)		
Number of pregnancy				
None	7 (38.9)	11 (61.1)	.001	
1-2	62 (31.2)	137 (68.8)		
3 and over	23 (15.3)	127 (84.7)		
Pregnancy planning status	S			
None	7 (38.9)	11 (61.1)	.011	
Planned pregnancy	56 (30.1)	130 (69.9)		
Unplanned pregnancy	29 (17.8)	134 (82.2)		
Family planning (FP) method				
No method	10 (23.3)	33 (76.7)	.002	
Effective FP method	77 (29.4)	185 (70.6)		
İneffective FP method	5 (8.1)	57 (91.9)		

 $<sup>(*</sup>X^2 = chi\text{-}square)$ 

#### **DISCUSSION**

Unwanted /unplanned pregnancies represent a social issue that may lead to medically, socially and economically adverse conditions<sup>(4,8,12)</sup>. Studies demonstrate a high rate of unwanted pregnancies and induced abortions and that these remain to represent a significant healthcare issue for women. Most of the unwanted pregnancies resulting from unprotected sexual intercourse are trying to be terminated by curettage or traditional methods applied under unsafe conditions. This imposes a risk on woman health<sup>(4,6,8)</sup>.

Contraception is an important and necessary application to prevent unwanted pregnancy in women of child-bearing potential<sup>(12)</sup>. The Turkey Population and Health Survey (TPHS) 2008 results reveal the following: the rate of modern contraception method use is low (46%), the rate of traditional withdrawal method use is high (26%), the rate of women who are familiar with the emergency contraception pills is low (29%) and the

<sup>(</sup>a insertion of a needle, soap, chicken feather, parsley, aspirin, cotton soaked in hydrogen peroxide, matchstick in the vagina, application of lemon juice, cola into the vagina, sitting on hot objects).

<sup>(</sup>b immediate standing up, lifting heavy objects, pulling the waist upwards, jumping from height).

<sup>(</sup>c taking aspirin, gripin and a boiled solution of fern, eating horse bean, drinking coffee).

rate of induced abortion is high (22%). Given these rates, understanding of the women's information on and applications for contraception including EC, is very important<sup>(13)</sup>.

In our trial, we detected that 25.8% of the women had undergone curettage at least once by their own will, 50.7% had not planned their pregnancy, and 11.7% became pregnant while using an EC method. The results from the study by Bilgili and Ayaz (2009) revealed that one in every three women experienced an undesirable pregnancy and most of them (73.5%) underwent abortion at least once<sup>(14)</sup>. Based on the results from the trial by Ege et al. (2011), 29.9% of the women underwent abortion and 29.5% didn't want their pregnancy<sup>(8)</sup>.

Unintended pregnancies represent a significant determinant of the woman health. Women either give birth to these undesirable babies or choose to terminate the pregnancy. Both of these choices contain significant risks to woman health<sup>(8)</sup>. The extremely high rates of unwanted pregnancies worldwide underline the importance of EC, however it is also revealed that EC is known and used less than necessary. Thus, selection of the contraceptive method, maintained use of the method and training of the women on EC are important (7,8). In our trial, 2.5% of the women knew about the EC methods. In the trial by Uzuner et al (2005)<sup>(15)</sup>, Gungor et al (2006)<sup>(16)</sup>, Korucuoglu et al (2007)<sup>(5)</sup>, Bilgili and Ayaz (2009)<sup>(14)</sup> Doganer et al (2011)<sup>(4)</sup> and Ege et al (2011)<sup>(8)</sup>, 31.7%, 17%, 37.9%, 26.8%, 24.7% and 29.9% of the women knew about the EC methods, respectively. The study by Chuang et al performed in USA detected a rate of 82% for knowing about the EC methods<sup>(17)</sup>. While the results obtained in Turkey are similar to our results, we can still observe that EC is not well-known and used fully yet. Our study revealed that 1.4% of the women used the morning after pills. The rate of EC use was 5.7% in the trial by Korucuoglu et al. (2007) and 17.4% in the trial by Ege et al.  $(2011)^{(5,8)}$ .

As the study results also show, the rates of women knowing about the EC methods are still low even if a slight increase is observed over the years. Some of the most important inconveniences related to using the EC methods include the fact that some women are not aware of the method, difficulties in providing access to the method, lack of information on the use of the method, service providers' deficient knowledge, exclusion of the EC counseling from the FP counseling services<sup>(4,7,14)</sup>. Training and counseling given to women

by professional healthcare provider on EC would raise awareness and contribute to maintaining the woman health. Each woman receiving FP counseling, and particularly those who don't use any contraception methods, those who use an ineffective or barrier method should be given information on EC; particularly those who use condom and diaphragm should be given in advance so that they can make use of it when necessary (2,6). The trainers should explain the women the objectives of the EC methods, when and how to use these methods and the sites where they can access these methods(4,7,14). The healthcare staff and particularly the nurses have an important role in informing the women and providing them with the opportunity to use these methods more effectively. The source of information on the EC methods may include the FP counselors, relevant leaflets and brochures, internet and friends. In our trial, according to the review of the EC information sources 40.3% of the women indicated the media and the internet, 36.9% indicated the healthcare providers as the source of information. In the study by Ozturk et al. (2002)18, 48.2% of the women received information from friends while in Uzuner et al. (2005)<sup>(15)</sup> study, 22.4% of the women received information through media and internet and 60.3% and 34.3% of the women in Doganer et al. (2011)<sup>(4)</sup> study received information from the neighborhood and the primary health care center, respectively.

In Turkey, EC counseling is not given routinely in the context of the FP counseling services. Therefore, women receive a low level of EC counseling service from the healthcare staff. In this trial, we detected that only 8.2% of the women receive information on the EC methods from the service unit providing them with the FP counseling. The trial by Dasikan et al. (2005) revealed that 41.8% of the midwifes and nurses employed at the primary healthcare centers gave information on the EC methods while the trial by Sevil et al. (2006) detected 8.6% provided routine EC counseling and 50.7% gave information when the women asked about the EC (19,20). The trial by Pınar et al. (2005) revealed that 42% of the healthcare providers found the information on EC enough<sup>(21)</sup>. The surveys performed demonstrated that service receivers and providers didn't have adequate information on this subject. This lack of information leads to exclusion of EC counseling from the FP counseling services and counterworks the effective use of  $EC^{(6)}$ . The deficiency in knowledge should be eliminated in healthcare professionals, a change of behaviors and attitude should be ensured and EC counseling should be included in all FP services and even in reproductive health counseling programs.

The comparison of the status of information on EC by the descriptive characteristics revealed that women with a high level of education, employed women, women  $\leq$  30 years of age, women with a good income perception, women who plan their pregnancy, women with a pregnancy number of 1-2 and those who use effective family planning had a statistically highly significant level of EC information (p<0.05) (Table IV). Ege et al. (2011) detected a high level of EC method information in women who use FP while Bilgili and Ayaz (2009) detected that women who were at least high-school graduates, those who were employed, lived in the city, nulliparous women and those who employed a FM method knew about the EC methods significantly more and that those who received a highschool education and higher, those who lived the longest in the city, underwent curettage and experienced undesirable pregnancies used the EC methods more (8,14). Gungor et al. detected in their trial (2006) that young women with a high level of education had a higher level of EC information<sup>(16)</sup>.

The other methods the women resort to in order to avoid unintended pregnancies are the traditional procedures. The inability to provide access to the healthcare services, financial difficulties, failure to receive adequate FP and EC counseling services, lack of information on the methods that could prevent pregnancy following unprotected sexual intercourse direct them to the traditional methods they are already familiar with<sup>(11,22,23)</sup>. These traditional applications used to prevent unintended pregnancies are commonly used in the Anatolian Region and impose a high risk to woman health<sup>(11,14,23)</sup>.

In our trial, we detected that 50.1% of the women were familiar with the traditional methods with the most well-known one being the VD (59.4%). 19.3% of the participating women used at least one traditional method to avoid pregnancy with 75.7% using VD and 9.7% practicing compulsive body movements (immediate standing up, lifting heavy objects, pulling the waist upwards, jumping from height). Despite resulting in several unfavorable health outcomes, VD is a commonly

used method worldwide. The VD application (irrigation of the vagina with water or other solutions) leads to impairment of the vaginal flora, increasing the risk of infection<sup>(22,23)</sup>. Several trials are being conducted on the VD method in our country; and VD is known to be used for different purposes by women. Women practice VD for the purpose of personal hygiene, for alleviating the complaints, eliminating the smell after menstruation, performing ablution and avoiding pregnancy following sexual intercourse<sup>(14,22,23)</sup>.

In a trial by Akın et al (2006), 42.6% of the women used VD after sexual intercourse with 13.1% doing this for avoiding pregnancy<sup>(23)</sup>. Sogukpınar et al (2005) detected in their trial that 48.7' of the women used VD while Karatay and Ozvaris (2006) revealed 72.1% of the participating women practiced VD after sexual intercourse<sup>(24,25)</sup>. In the trial by Bilgili and Ayaz (2009), 22.2% of the women used traditional methods after unprotected sexual intercourse (vaginal douching, urination after sexual intercourse, lifting heavy objects etc)<sup>(14)</sup>.

These traditional methods are hazardous for the health. Women generally learn about these traditional applications from the elder family members and friends (11,22,23). In our trial, we detected that women obtained data on the traditional methods from their elder family members and friends (81%). In their trial, Akın et al. (2006) detected that 77% of the women learnt about these methods from their friends and relatives<sup>(23)</sup>.

In this trial, we observed no statistically significant correlation between the status of knowing and using the traditional methods, and the descriptive characteristics (p>0.05). In the trial by Sevindik et al (2007), the traditional method were observed to be more common among women  $\geq 30$  years of age, and women with a low to moderate level of education and income<sup>(11)</sup>. This lack of information on EC and FP should be eliminated via training and counseling. Women should be explained that these traditional methods cannot avoid unintended pregnancies and that they don't have the capacities of the EC and FP methods. In fight against these methods, which have an adverse impact on the woman health, the healthcare professionals should also pay attention to the training of the elder family members, relatives/friends, who are the source of the misleading information.

In conclusion, we detected a high level of information on and use of traditional methods but a low level of EC information and use among the participating women. Women with a low level of data on EC resort to traditional methods that damage the health to avoid pregnancy. The ability to use EC depends on accurate information and easy access to the methods. Making the training and counseling on EC methods widespread within the FP and reproductive health services by eliminating the healthcare professionals' deficiency in knowledge on the EC methods would make a favorable contribution to the woman health.

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