

Assessment of Knowledge, Attitude and Practices of Emergency Contraception among 1st Year Medical Students in Central India

Sakshi Damke, Kamlesh Chaudhari*, Madhurima Sachan

Department of Obstetrics and Gynaecology, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Sawangi (M), Wardha, Maharashtra, India

ABSTRACT

Introduction: In recent times a majority of the unintended pregnancies occur among adolescents and young women in their early 20's. The proportion of unintended pregnancies among adolescents is as high as around 82% and varies with age. Therefore, early education and training regarding contraception right from adolescents should be prioritized. The goal of this study was to find out knowledge and attitude of first-year medical students about emergency contraception.

Materials and Methods: This cross-sectional study was conducted among 138 students of 1st year MBBS, Jawaharlal Nehru Medical College, Wardha. The information was gathered using a predesigned and organized questionnaire.

Results: Out of the total 138 respondents, mean age group was 19.37+/- 1.2 years, out of which 71(51.4%) were female and 67(48.6%) were male. 95.3% people knew what emergency contraception was, where as 4.7% people have never heard about it. The most frequent sources of information were friends and doctors. In terms of their attitudes, 77.6% students think that unplanned sexual intercourse is a problem for all young females, half of the students (51.2%) thought easy availability of EC pills would lead to promiscuity and according to more than half of the students (56.5%), EC pills should be made available to women aged 18 and above only.

Conclusion: Emergency contraception is a safe and effective technique to which all women should have easy access to in case of unprotected intercourse. However, 1st year medical students lack extensive and accurate knowledge about EC. Adolescents must be educated not just about the drug's existence, but also about its over-the-counter availability, its effectiveness in preventing pregnancy, and the conditions in which it can be used.

Key words: Emergency contraception, Medical students, Knowledge, Attitude

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Corresponding author: Kamlesh Chaudhari

e-mail✉: dr.kamleshchaudhari@gmail.com

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INTRODUCTION

An estimated 42 million abortions are performed globally each year, with 20 million of them being illegal or dangerous. 97% of this unsafe abortion occurs in developing countries [1]. Unsafe abortion is defined by the World Health Organization as a method for terminating an undesired pregnancy in a setting with low medical standards or by a person who lacks the essential expertise. In recent times a majority of these unintended pregnancies occur among adolescents and

young women in their early 20's. The proportion of unintended pregnancies among adolescents is as high as around 82% and varies with age [2]. The high risk of unintended pregnancy among this age group is mostly due to the lack of understanding of various forms of contraceptive techniques, as well as the fact that they are unlikely to consult a family planning practitioner before or shortly after a sexual encounter. Therefore, early education and training regarding contraception right from adolescents should be prioritized.

Regardless of the availability of highly effective methods of contraception countless unintended or unplanned pregnancy still occurs. Using emergency contraception, several of these unwanted births can be avoided. The term "emergency contraception" refers to the use of a medication or device to prevent pregnancy after unprotected sexual contact. It is both secure and efficient [3]. Emergency contraception pill, also known as postcoital pill or the morning-after pill, is a type of

contraception that uses hormones to prevent the ovaries from producing or releasing an egg, sperm from fertilizing an egg, or the uterus lining from becoming chemically altered, preventing fertilized eggs from implanting. It can be used after unplanned, inadequately protected or unprotected coitus, following sexual assault or rape and in cases of contraceptive failure. There are 2 types of EC available: (1) emergency contraception pills (2) copper containing IUD's. Based on ICEC guideline 3 ECP regimens indicated are: levonorgestrel 1.5 mg, ulipristal acetate 30 mg, mifepristone 10–25 mg [4]. Some OC pills also can be used for emergency contraception known as Yuzpe's regimen. Levonorgestrel is more effective than Yuzpe, while ulipristal acetate and mid-dose mifepristone are both more effective than levonorgestrel. [5].

According to WHO Copper bearing IUD is the most effective form of EC available. The primary mechanism of action of progestogen-only emergency contraceptive pills is to prevent fertilization by inhibition of ovulation. Progesterone receptor modulator emergency contraceptive tablets like low-dose and mid-dose mifepristone and ulipristal acetate work by inhibiting or delaying ovulation, which prevents conception. Copper toxicity to sperm and ova prevents conception, is the principal mechanism of action of copper-releasing intrauterine devices (IUDs) as emergency contraception. Because copper-releasing IUDs are so successful as emergency contraceptives, they must also be able to prevent some pregnancies through post-fertilization effects like implantation prevention.

Emergency contraception is the only method available to prevent unwanted pregnancy after contraceptive failure or unprotected sexual intercourse and therefore knowledge about it should be imparted from adolescent age [6]. The main obstacle for increase in the use of EC is the lack of accurate knowledge and false beliefs regarding EC. Increase in the use of emergency contraception will ultimately reduce the incidence of unplanned pregnancy and unsafe abortions which are a major hurdle for optimum maternal health.

Present study is a questionnaire based study which aims to assess the knowledge attitude and practices regarding emergency contraception among 1st year medical students.

Objectives

The goal of this study was to examine first-year medical students' knowledge, attitudes, and practices regarding emergency contraception.

MATERIALS AND METHODS

This cross-sectional study was conducted among 138 students of 1st year MBBS, Jawaharlal Nehru Medical College, Sawangi, Wardha. A questionnaire of 18 questions that were predesigned, structured and self-administered were handed over to students. Out of the 18 questions in the questionnaire, 12 were knowledge based and 6 focused on attitude and practice. Utmost confidentiality and anonymity was reassured and the nature of the study was thoroughly explained to avoid confusions. Verbal consent was taken from each student prior to the study. Data was collected, statistics were analysed and presented in the form of percentages (Figure 1).

Out of the 138 students that participated in the study 71(51.4%) were female and 67(48.6%) were male. The mean age group of respondents was 19.37+/- 1.2 years. A total of 95.3% people knew what emergency contraception was, whereas 4.7% people have never heard about it. 37% people said that they first heard about it from a friend, 33.3% first heard about it from doctors, 19.6% from television and 10.1% from internet. 48.6% of them correctly knew that we could obtain EC pill from pharmacy as an over-the-counter drug, 37.3% people thought that we can get it from the pharmacy with prescription of a doctor, 10.5% people thought they can get it only from a doctor and 3.6% didn't know about it. 42.8% people think that EC pill is effective only when taken within 24hrs of intercourse, 37.7% said it is effective within 48hrs of intercourse, 15.9% knew correctly that it should be taken within 72hrs of intercourse and 3.6% people said it can be taken any time after intercourse. 42% people think that EC pill should be used only twice a year, whereas 40.6% people said it can be used 12 times a year, 10.6% people think there is no limit to how many times we can use it during a year, and 6.5% people think it should be used only once a year. When asked can EC pill be taken in a woman already taking OCP's 65.9% correctly said yes.

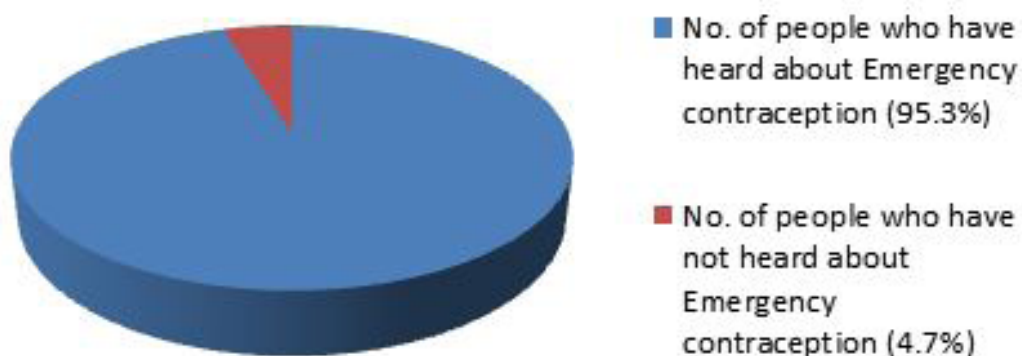


Figure 1: People who have heard about emergency contraception.

When asked about the situations in which EC pills should be taken, 6.2% people think that it should be taken during condom tear or damage, 9.4% felt during missed OCP's, 15.1% said during unprotected sexual intercourse and 69.3% said it should be taken during all of the above situations. Side effect of EC pills when asked, 56.7% said mild side effects like nausea, vomiting, irregular bleeding and headache may occur, 19.3% said side effects like severe abdominal pain can occur, 17.5% think it could lead to anovulation and 6.5% said there won't be any side effects. About drug composition of EC pills as compared to OCP's 48.6% said its completely different composition, 46.4% said it's the same hormone but in higher dose, 4% think it's the same and 1% think it's the same hormone but with lower dose. 39.9% people think that EC pills can be used to terminate pregnancy after Urine pregnancy test (UPT) is positive whereas 60.1% correctly think it can't. 80.4% people correctly answered that EC pill and OCP's cannot prevent sexually transmitted diseases, while 19.6% think it can prevent STD's. When asked regarding effectiveness of EC pills in preventing pregnancy: 19.6% think it is highly effective

(>95%) in preventing pregnancy, 35.5% think it is 75% effective, 37% think it is only 50% effective and 8% think its effectiveness is <25%.

34.1% people think that using EC pills is an effective method of contraception for routine use, whereas 65.9% people said it shouldn't be used routine use. 56.5% people think that EC pills should be available only to people above 18yrs of age whereas 43.5% said that it should be available to everyone irrespective of their age. 60.1% people believe it should be available only to victims of rape.

When asked about their opinion on whether the EC pills should be easily available and inexpensive 6.5% people strongly agreed with the idea, 42.8% agree with it, 39.1% people were neutral about this and 11.6% people disagree with the idea. 51.2% people have a view that easy availability of EC pills will increase promiscuity whereas 48.8% people disagree with the idea. 77.6% people believe that unplanned sexual intercourse is a problem for all young females (Tables 1 and 2).

Table 1: People who have heard about emergency contraception.

	Internet	Doctor	Friends	Television
Where did you first hear about EC?	10.10%	33.30%	37%	19.60%
Where can you get the EC pill from?	Doctor 10.50%	Pharmacy with prescription 37.30%	Pharmacy as an over-counter drug 48.60%	Don't know 3.60%
When should the EC pills be taken	Within 24hrs of intercourse 42.80%	Within 48hrs of intercourse 37.70%	Within 72hrs of intercourse 15.90%	Any time after intercourse 3.60%
How many times can EC be taken during a year	Twice 42%	Not more than 12 times 40.60%	No limit 10.90%	Only once 6.50%
Situations in which EC pills can be taken - % (no. Of people)	Missed OCP 9.40%	Unprotected Intercourse 15.10%	Condom tear or damage 6.20%	All of the above 69.30%
Side effects of EC pills	Mild nausea, vomiting, Irregular bleeding 56.70%	Severe abdominal pain 19.30%	Anovulatin 17.50%	No side effects 6.50%
Drug composition of EC pills as compared to OCP	Completely different composition 48.60%	Same hormone but higher dose 46.80%	Same as OCP's 4%	Same hormone lower dose 1%
ATTITUDE AND PRACTICES				
Should the EC pills be easily available and inexpensive	Strongly agree 6.50%	Agree 42.80%	Neutral 39.10%	Disagree 11.60%
Effectiveness of EC pill in preventing pregnancy	Highly effective (>95%) 19.60%	75% effectiveness 35.50%	50% effectiveness 37%	<25% effectiveness 8%

Table 2: Questionnaire 2.

	YES	NO
Can EC pills be taken if woman is already taking OCP's	65.90%	34.10%
Can EC pills be taken to terminate pregnancy once UPT* is positive	39.90%	60.10%
Can EC pills and OCP's prevent STD's#	19.60%	80.40%
Is EC pill an effective method of contraception for routine use?	34.10%	65.90%
ATTITUDE AND PRACTICES		
Should EC pills be available only to woman over 18 yrs of age?	56.50%	43.50%

	YES	NO
Should EC pills be available only for victims of rape?	60.10%	39.90%
Do you think easy availability of EC pills increase promiscuity?	51.20%	48.80%
Do you think unplanned sexual intercourse is a problem for all young females?	77.60%	22.50%
*UPT- Urine Pregnancy Test		
#STD's: Sexually Transmitted Diseases		

DISCUSSION

Unplanned pregnancy, which can occur for a variety of reasons, is one of the major causes of illegal abortions [7]. In circumstances of unplanned sexual activity, emergency contraception provides a second opportunity at prevention [8]. Increased understanding and usage of EC is one of the measures that can be taken to avoid unwanted pregnancy [6]. The current study was designed with this in mind. 1st year medical students were chosen as the study population. The goal was to assess the future health-care providers degree of awareness.

The results of this study demonstrate that most of the first-year medical students have a superficial understanding of emergency contraception (95.3%), as compared to the study done among female college students by Arora, et al. [9] and among engineering students in Nagpur by Relwani, et al. [10] where awareness was around 90%, a study by Mandal, et al. [11] among students of rural area of Kolkata found that only 61% students have heard about emergency contraception. This large disparity in emergency contraceptive information might be due to the fact that the students were from urban area, and had more access to social media and had a higher socioeconomic position. In our study 86.7% students knew that EC pills can be obtained at a pharmacy. Out of this 86.7% , 48.6% knew that it can be obtained as an over the counter drug. The studies by Arora, et al. [9] among female college students and Relwani, et al. [10] among engineering students found that the people who were aware about its availability in pharmacy were 70% and 57% respectively.

In our study only 15.9% students were aware of the 72hrs effective interval of the EC pill usage, post coitus. Studies conducted by Puri S and Bhatia, et al. [6] had similar findings to the current study , while in the study done by Arora, et al. [9], which included postgraduate woman (both married and unmarried), 41% were aware of the correct effective interval. This lack of awareness of the effective interval of EC pill usage post coitus put these women at an increased risk of unwanted pregnancies. Students should be advised that while ECP should not be used as a primary contraceptive method, there is no restriction to how many times they can use it in a year. In our study 65.5% knew that it shouldn't be used as primary contraception.

According to the World Health Organization (WHO) ECPs have adverse effects that are comparable to OCPs, including nausea and vomiting, minor irregular vaginal

bleeding, and exhaustion. Side effects are minor and infrequent, and they usually go away on their own [12]. However in our study even though 56.7% knew the side effects, 17.6% student thought that it could lead to anovulation. In another study done by Solipuram, et al. among medical undergraduates, 31% students thought that ECP use can lead to anovulation [13-17].

CONCLUSION

Emergency contraception is a safe and effective intervention to which all women should have simple access in the case of an unprotected intercourse. However, 1st year medical students lack extensive and accurate knowledge about EC. The greatest impediment to widespread use of ECs is a lack of proper knowledge about them. As a result, these flaws must be addressed in order to maximize the optimal usage of ECs. Both education and attitudes toward the use of EC must be improved. Spreading accurate information should be at the forefront of ECP promotion strategies. Adolescents must be educated not just about the drug's existence, but also about its over-the-counter availability, efficacy in preventing pregnancy, and situations in which it might be used. Incorporation of this information in school sex education program should be done. Future policies should place a greater emphasis on developing and executing various educational programmes and counseling on contraception use for both high school and university students to prevent unwanted pregnancies in the future.

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