ORIGINAL ARTICLE

Knowledge, Attitude, and Practice of Medical Students toward Emergency Contraception

Minal Kadam[1], Savita Kadam[2], Lakshmi Rajkonda[3]

Abstract

Although India became the first country in the world to introduce National Family Planning policy, still the receptivity of contraception is very poor. Innumerable women irrespective of their literacy status are not aware of emergency contraceptive (EC) methods, which invariably leads to unwanted pregnancies resulting in increasing incidences of abortions. Emergency contraceptive pills (ECPs) can avoid many such pregnancies.

Objective: To assess the knowledge and attitude about ECPs among medical interns and postgraduates (PGs).

Materials and methods: A cross-sectional study was conducted among 174 medical students (interns and PG resident doctors) studying at the tertiary care center in Maharashtra. The period of this study was from January 2018 to June 2018. A pre-structured questionnaire was used to collect the data. The data were analyzed by applying statistical tests.

Results: In this study, a total number of 174 interns and PG resident doctors participated, of which 40% were male and 60% were female. About 80% participants had knowledge of ECPs and 15% had used ECPs. Overall, positive attitude toward ECPs was observed. About 29% participants wanted ECPs to be prescribed by doctors apart from being available over the counter (OTC).

Conclusion: Knowledge of medical students as a healthcare provider was inadequate, so there is need for more emphasis on the emergency contraception (EC) among the young medical graduates and PGs.

Keywords: Abortion, Attitude, Emergency contraception, Knowledge.

MGM Journal of Medical Sciences (2019): 10.5005/jp-journals-10036-1226

Introduction

Emergency contraception (EC) is an effective contraceptive method, which could prevent unwanted pregnancies in many women. In 2002, the Ministry of Health and Family Welfare (MoHFW) in India approved the use of emergency contraceptive pills (ECPs) and they were made available over the counter (OTC) in the year 2005.[1] As no contraceptive method is 100% effective in preventing unwanted pregnancies, this gives women a second chance to prevent pregnancy in the case of failure of conventional methods of contraception, unprotected sex, or in the case of forced sex. ECPs are available in over 140 countries and OTC in 60 countries.[7,8]

The ECP is also known as the morning after pill. The term morning after pill is ambiguous as ECPs can be commenced soon after unprotected sex than morning after, and later can be taken up to 120 hours of unprotected intercourse.[1]

Two main types of EC are available:

- Intrauterine device (IUD/IUCD).
- Pills—estrogen–progesterone pills (Yuzpe regimen), progestin-only pills (levonorgestrel), ulipristal acetate (UPA), and mifepristone.

Copper-T IUD

In 1976, Lippes et al. were the first to use copper-T IUCD as an EC.[9]

This is the only nonhormonal form of EC. According to the guidelines, the IUCD can be inserted within 5 days of unprotected intercourse or it can be inserted up to 5 days after ovulation. The WHO guidelines suggest that copper IUCD can be inserted up to day 12 of the cycle without any restrictions or at any time if the urine pregnancy test is negative. The copper IUD also provides additional contraception for at least 12 years.[1–5,10] From a review of 42 studies, it was revealed that the pregnancy rate was less than 0.1% after insertion of copper IUD for EC.[11]

[1,3]Department of Obstetrics and Gynecology, MGM Medical College and Hospital, Aurangabad, Maharashtra, India

[2]Department of Anatomy, MGM Medical College and Hospital, Aurangabad, Maharashtra, India

Corresponding Author: Minal Kadam, Department of Obstetrics and Gynecology, MGM Medical College and Hospital, N6, CIDCO, Aurangabad, Maharashtra, India, Phone: +91-7020421841, e-mail: minalkadamjadhav@gmail.com

How to cite this article: Kadam M, Kadam S, *et al.* Knowledge, Attitude, and Practice of Medical Students toward Emergency Contraception. MGM J Med Sci 2019;6(1):25–28.

Source of support: MGMIHS

Conflict of interest: None

Copper IUD is preferred in women with history of deep venous thrombosis, pulmonary embolism, and coronary events, women on enzyme inducing drugs, or in women with BMI ≥30 kg/m^2. IUD is not suitable for women with pelvic infections and unexplained vaginal bleeding.[11]

Mechanism of Action

Copper-T IUD releases copper ions that have a toxic effect on sperms, which inhibits fertilization. Also, it affects the endometrial receptivity, preventing implantation.

Yuzpe Regimen

Estrogen–progesterone combination pills were first prescribed as ECPs by Dr Albert Yuzpe in the year 1974. This method was effective when used within 72 hours of unprotected sex.[1,6] In this regimen, the birth pills are taken in two doses, 12 hours apart and depending upon the quantity of estrogen in each pill, failure rate ranges from 2.0 to 3.5%.

LNG Pill

This is progesterone-only pill, commonly sold as i-Pill. The initial dose is 0.75 mg, two doses 12 hours apart or 1.5 mg single dose within 72 hours of unprotected sex. WHO trial of the LNG regimen showed no decline in efficacy till day 5.

Mechanism of Action

LNG pill, if taken before luteinizing hormone (LH) surge, prevents and/or delays ovulation. However, it is not effective after LH surge. The LNG pill has no effect on implantation or the endometrium.

UPA

This is the newer and most effective ECP. UPA is widely available in more than 75 countries. It is used in a single dose of 30 mg, within 120 hours of unprotected intercourse.

Mechanism of Action

UPA acts by preventing or delaying ovulation, both before and after LH surge and before LH peak. The failure rate of UPA ranges from 0.9% to 2.1%.[1,5,10]

Side Effects

Decrease or absence of menstrual bleeding, dizziness, hot flushes, etc.

Mifepristone

It is an antiprogesterone drug, commonly used in first trimester abortions. It can be taken in low dose (<25 mg) or mid dose (25–50 mg). It can be consumed within 5 days of unprotected intercourse.

Mechanism of Action

It prevents or delays ovulation and also has an effect on endometrium, if consumed post ovulation.[1,10]

Aims and Objectives

To study the knowledge regarding EC in interns and PGs in tertiary care center in Maharashtra.

Materials and Methods

Type of study: Cross-sectional study
Study period: January 2018 to June 2018
Sample size: 174
Data collection: Using pre-structured questionnaire

Results

A total of 174 participants were included in the study. Majority of them were unmarried (92%). Most of the interns and PG residents were in the age group of 20–25 years, of which 40% were females and 60% were males. From the group of students, 80% students had knowledge of ECPs and they also knew that ECP is also called morning after pill. Students who had used ECPs at some point accounted to about 15%, and 36% students knew the cost of ECPs. When asked about the time during which ECPs are to be used after unprotected sex, 80% suggested up to 72 hours, 9% suggested up to 48 hours, 5% suggested up to 24 hours, 4% suggested up to 12 hours, and 2% did not answer. According to 68% of the students, ECPs should be available OTC, 29% said doctor should prescribe ECPs, and 3% of the students did not know the source of ECPs. About 47% students knew the side effects of ECPs and 53% did not know the side effects. The effectiveness of ECPs was known to 22% only. According to 23% students, ECPs can be a substitute for regular contraception, whereas, for 61%, it cannot be a substitute, and 16% had no idea (Tables 1 to 8).

Various reasons for using ECPs was given as split condom by 64%, after missing oral contraceptive pills by 21%, after sexual assault by 34%, and think if conventional contraception has not been used (more than one options were marked) by 13%. When asked about the attitude toward premarital sex, 43% of the students do not agree with premarital sex, 36% accept premarital sex if one has a boyfriend/girlfriend, and 21% accept if they have plans for marriage in near future. Advertisement on social media was preferred by 84%, 7% differed, and 9% had no opinion.

When physical and mental health after abortion is considered, according to 14% there could be no impact at all, 37% said might

Table 1: Demographic characteristics of study population

Demographic characteristics	*Number (n = 174)*	*Percentage*
Gender		
Male	104	60
Female	70	40
Age		
<25 years	128	74
>25 years	46	26
Marital status		
Married	14	8
Unmarried	160	92

In our study, 92% were unmarried, out of which 15% were in relation and using ECPs and 74% were <25 years

Table 2: Timing of ECPs

Variables	*Percentage*
Within 72 hours	80
Within 48 hours	9
Within 24 hours	5
Within 12 hours	4
Could not answer	2

80% students knew that ECPs had to be taken within 72 hours

Table 3: Used ECPs

Variables	*Percentage*
Used ECPs	
Used	15
Not used	85

85% students had not used emergency contraception

Table 4: Source of ECPs

Variables	*Percentage*
Over the counter	68
Prescribed by doctor	29
Could not answer	3

68% students suggested ECPs should be available OTC

Table 5: Side effects of ECPs

Variables	*Percentage*
Known	47
Not known	53

Side effects were approximately equally known and unknown by students

Table 6: Effectiveness of ECPs

Variables	*Percentage*
Known	22
Not known	78

Most of the students did not know the effectiveness of ECPs

Table 7: Substitute to regular contraception

Variables	*Percentage*
Yes	23
No	61
Do not know	16

Most of the students do not think ECP is a substitute for regular contraception

Table 8: Attitude toward premarital sex

Against premarital sex	*Percentage*
Male	15
Female	28

28% females were against premarital sex

have slight impact, 26% said there could be serious impact, and 23% were uncertain about it. In our study, 15% were not sure whether ECPs protect from sexually transmitted diseases (STD)/reproductive tract infections (RTIs).

Discussion

To study the knowledge, attitude, and practice of EC, many studies have been conducted. Although EC is not recommended as a regular family planning method, it is a useful method after unprotected sexual intercourse to decrease the chances of unwanted pregnancy.[12] In India, despite a National Family Welfare Program and extensive efforts by the government, the rate of unplanned pregnancies and illegal abortions are high. It is estimated that 78% pregnancies are unplanned and 25% are definitely unwanted. EC is also useful in failure of contraception.

In our study, adequate knowledge of contraception was among 80.4% of medical students, which is much more than the study conducted by Gupta et al.[13] among medical students in North West India which was only 45.1%. A similar study was also conducted in Delhi, which showed 50% of students were having adequate knowledge of EC. A similar study conducted in North Gondar by Fantahun et al. showed the level of knowledge of EC to be 75%.[16]

All the indications of ECP usage were accurately known to 86.6% of students, which is similar to study conducted by Gupta et al. in North West India.[13] In our study, 15% students have used ECPs. This is almost the same (17%) as that of the study conducted by Fantahun et al.[16] in North Gondar and Admina et al. in Nigeria. In another study conducted by Renjhen et al. among medical students in Sikkim, 17% students used ECPs.[15,16]

In our study, 80% students knew the correct time of administration of ECPs which was quite high as compared to the study done by Tessema et al.[17] at Jima University, Ethiopia 2013, where only 61.5% students knew the correct time of ECP administration. In our study, 4% students advised to take ECPs as early as possible.

Regarding the availability of ECPs, 29% participants gave the opinion that it should be prescribed by doctors only, which is very less than the findings of the study by Singh et al. who reported that 65% of medical students wants that ECPs should be sold only on prescription of doctors.[14] In our study, 15% participants were not sure whether ECPs protect from STDs/RTIs, which is similar to the study of Dogra and Wankhede who showed 13.9% were not sure whether ECPs protect from STDs/RTIs.[12,17]

In our study, 23% participants agreed that ECPs are not a substitute to regular contraception, which is similar to the study done in Ghana by Baiden et al. in which 26% participants think so.[18] The attitude of medical students toward premarital sex is studied for the first time in our study, which showed that 43% medical students were against premarital sex.

Conclusion

Participants have positive attitude toward EC. The lack of appropriate knowledge of EC among medical students is a cause of concern. It should alarm the medical teaching system as EC is the only method that can be used to prevent pregnancy after unprotected sex or contraceptive failure. There is more need for awareness of EC.

References

1. Dixit A, Khan ME, et al. Mainstreaming of emergency contraception pill in India: challenges and opportunities. Indian J Community Med 2015;40(1):49–55. DOI: 10.4103/0970-0218.149271.
2. Ministry of Health and Family Welfare (MoHFW). Home delivery of contraceptives (condoms, OCPs, ECPs) by ASHA at the doorstep of beneficiaries. Curricular issued by MoHFW. 2011. [Last accessed on 2014 Feb 7]. Available from: http://mohfw.nic.in/WriteReadData/l892s/1318292396Home%20Delivery%20of%20Condems.pdf
3. Office of the Registrar General and Census Commissioner, India. Ministry of Home Affairs, Government of India. New Delhi: ORG; 2010–2011. Annual Health Survey (2010–2011).
4. World Health Organization (WHO) [Internet] Geneva: WHO; c2012. [Cited 2014 Jan 23; about 4 screen]. Available from: http://www.who.int/mediacentre/factsheets/fs244/en/ Emergency contraception. Fact sheet no. 244; 2012 Jul.
5. Cleland K, Raymond EG, et al. Emergency contraception review: evidence-based recommendations for clinicians. Clin Obstet Gynecol 2014;57(4):741–750. DOI: 10.1097/GRF.0000000000000056.
6. Trussell J, Ellertson C, et al. The Yuzpe regimen of emergency contraception: how long after the morning after? Obstet Gynecol 1996;88(1):150–154. DOI: 10.1016/0029-7844(96)00036-1.
7. Sweileh WM, Sa'ed HZ, et al. Worldwide research in emergency contraception: a bolometric analysis. Fertil Res Pract 2015;1(1):6. DOI: 10.1186/2054-7099-1-6.
8. International consortium for emergency contraception (ICEC); 2018. Available from: http://www.cecinfo.org.
9. Lippes J, Malik T, et al. The posteoital copper-T. Adv Plan Parent 1976;11(1):24–29.
10. Coles M, Urbach K, et al. Emergency contraception for adolescents and young adults: guidance for health care professionals. J Adolesc Health 2016;58:245–248. DOI: 10.1016/j.jadohealth.2015.11.012.
11. Cleland K, Zhu H, et al. The efficacy of intrauterine devices for emergency contraception: a systematic review of 35 years of experience. Hum Reprod 2012;27(7):1994–2000. DOI: 10.1093/humrep/des140.
12. Dogra A, Wankhede U. Knowledge and attitude of medical undergraduate, interns and postgraduate students towards emergency contraception. Int J Reprod Contracept Obstet Gynecol 2017;6(7):2944–2947. DOI: 10.18203/2320-1770.ijrcog20172912.
13. Gupta RK, Raina SK, et al. Emergency contraception: knowledge and attitude toward its use among medical students of a medical college in north-west India. J Pharm Bioallied Sci 2016;8(3):235–239. DOI: 10.4103/0975-7406.175974.
14. Singh S, Mittal S, et al. Emergency contraception: knowledge and views of doctors in Delhi. Health Popul Perspect Issues 2002;25(1):45–54.

15. Renjhen P, Kumar A, et al. A study on knowledge, attitude and practice of contraception among college students in Sikkim, India. J Turk Ger Gynecol Assoc 2010;11(2):78–81. DOI: 10.5152/jtgga.2010.03.
16. Fantahun M, Chala F, et al. Knowledge, attitude and practice of family planning among senior high school students in North Gondar. Ethiop Med J 1995;33:21–29.
17. Tessema M, Bayu H. Knowledge, Attitude and Practice on Emergency Contraception and Associated Factors among Female Students of Debre-Markos University, Debre-Markos Town, East Gojam Zone, North West Ethiopia. Global Journal of Medical Research: E Gynecology and Obstetrics 2013;15(1):1–7.
18. Baiden F, Awini E, et al. Perception of university students in Ghana about emergency contraception. Contraception 2002;66:23–26.
19. Fritz M, Speroff L. Clinical gynecologic endocrinology and infertility. 8th edn. New Delhi: Walters Kluwer (India) Pvt Ltd, Indian Reprint ISBN-13: 978-81-8473-432-4, pp. 1040–1044, ch. 22.