ORIGINAL ATICLE

EMERGENCY CONTRACEPTION: KNOWLEDGE, ATTITUDE AND PRACTICES AMONG DOCTORS OF A TERTIARY CARE HOSPITAL

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Background: In Pakistan maternal mortality rate (MMR) is very high and more than one in five women die from pregnancy related causes; solution to this is to have low fertility rate. The emergency contraceptives (ECs) can be used to prevent unwanted pregnancies. The aim of this study was to assess the knowledge, attitude and practice about ECs among doctors. **Methods:** Institution-based cross-sectional descriptive study on knowledge, attitude and practice of ECs was conducted at Rawal Hospital from Feb to May, 2012. Data was collected using structured questionnaire and analysed using SPSS-16. **Results:** Fifty-seven percent of the respondents were >30 years of age, 94% were Muslim, 81% were married and 51% were women. Ninety-seven percent had heard of ECs before, only 17% knew Intra-uterine contraceptive device (IUCD) a method of EC. Sixty-one percent responded that IUCD should be removed if patient gets pregnant (p=0.007) and according to 31% ECs were not abortifacient (p=0.045). Regarding attitude, 55.5% of the participants supported its use (p=0.027) and agreed to its easy accessibility (p=0.004). Thirty-eight percent responded an increased dose of birth control pills as a form of EC (p=0.008), while 40% did not agree that ECs are effective when taken before intercourse (p=0.011). **Conclusion:** Knowledge and practice of ECs is very low among doctors but a positive attitude is there. Evidence-based knowledge to family physicians regarding emergency contraception is strongly recommended to reduce the chances of MMR.

Keywords: Attitude, Emergency Contraception, Knowledge, Practice, Maternal Mortality Rate

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INTRODUCTION

Emergency contraception (EC) also called 'morning-after pill' is a type of modern contraception which is indicated after unprotected coitus, following sexual abuse, or non-use of regular contraception. The EC plays a vital role in preventing unintended pregnancy, which in turn helps to reduce unintended child birth and unsafe abortion, the major problems of maternal health.[1,2] Emergency contraception is found to be effective if used within 72 hours after unprotected sexual intercourse and is associated with a failure rate of 0.2–3%.[3]

The ECs that work by preventing fertilisation, implantation and tubal transportation of sperm and ovum include contraceptive pills and intrauterine contraceptive devices (IUCDs) which are effective if inserted within 5 days of unprotected sexual intercourse. Emergency contraception is said to be safe with minor side effects like nausea and vomiting in case of pills, and infection for IUCDs if not used properly.[4,5]

Each year about 250 million pregnancies occur globally, out of which about one million pregnancies are seen in teenagers worldwide.[6] About 1/3 of these pregnancies are unintended and 20% of these undergo induced abortion.[7] According to new worldwide estimates, the overall abortion rate is almost similar in developing and developed countries, while the unsafe abortions are dominating in the developing countries.[7,8] In low socio-economic countries, out of 60 million unintended pregnancies (2/3 of which are due to non-usage of contraceptives), 19% undergo induced abortion and 11% are unsafe.[7] Unsafe abortion has many ill effects on women's health. About 68,000 women die because of unsafe abortion each year, while millions of women end up with complications of unsafe abortion like severe infection and bleeding which could have been reduced by using EC.[9]

Globally, 11% births are given by adolescent girls of age 15–19 years annually, 95% of which are in low-income countries. Most adolescent pregnancies occur because of early marriage arranged by the girls' family due to some cultural influences. Adolescent pregnancies affect the health of mother and child, and have a devastating impact on social and psychological life of the girls.[10]

According to UN projection, Pakistan is the 7th most populous country with over 40% of its citizens under the age of 15 years, and will become 4th in rank by the year 2050. The total fertility rate in Pakistan had declined slowly, from about 5.4 lifetime births per woman in 1990–91 to 3.17 in 2012.[11] The PDH survey provided the Pakistani current maternal mortality rate (MMR) of 260 maternal deaths per 100,000 live births with a higher ratio in rural areas.[12] Pakistan's millennium development MMR goal is to reach <140 by the year 2015.[13]

In Pakistan about 200,000 maternal deaths occur per year, this is due to high fertility rate and delivery by unskilled birth attendants. On the other hand contraceptive services are very poor resulting in high

number of unintended pregnancies and induced miscarriages. An estimated 900 million women want to avoid a child and undergo induced abortion annually that comes to 29/1,000 women/annum aged 15–49 years.[14] Despite the fact that different modern contraceptives exist worldwide the problem of unintended pregnancy still exists, may be due to gap in awareness, negative attitude towards contraception, low accessibility, or a result of sexual assault. At times, the knowledge and practice might be there but it is very vital to have ECs as a backup method to prevent unplanned or mistimed pregnancies in low socio-economic countries.[12]

MATERIAL AND METHODS

This cross-sectional descriptive study was conducted from February to May 2012 amongst 110 health professionals including faculty, physicians, surgeons, residents, and medical officers at Rawal Institute of Health Sciences, Islamabad, Pakistan.

Data were collected using self-administered 28 items questionnaire prepared in English to assess socioeconomic status, knowledge, attitude and practice towards EC. The questions had yes, no and don't know options. Most of the questions were adapted from previously conducted studies with some changes based on the local context. Knowledge of EC was assessed through 9 questions that reflected common concepts regarding effectiveness, availability, safety and foetal anomalies; attitudes were assessed through 8 questions with yes and no options that reflected common deterrents to EC use; and practice was assessed through another 5 questions that reflected common misconceptions regarding EC use. The data were collected on a Performa. Ethical approval was issued by Ethical Committee Rawal Institute of Health Sciences Islamabad.

The data were analysed using SPSS-16. The cross tabulation and logistic regression were applied to present the results.

RESULTS

Table-1 shows socio-demographic characteristics of the participants. A total of 110 out of 125 (88%) participants answered the questionnaire. Of the total, 20.9% of the participants had ever heard of ECs or were unsure about these methods, while 79.1% showed considerable familiarity with emergency contraception.

Table-2 shows the responses to questions regarding knowledge, attitudes and practices of ECs. Regarding the source of information about EC, 47 (42.7%) reported that they knew through media and internet, 50 (45.5%) through their medical education, and 13 (11.8%) not even heard of ECs. Majority (52.7%) of the participants knew that ECs can be obtained from pharmacy of the health institutes, while according to 35% ECs can be obtained from friends or partners. Among most (60.9%), the contraceptive pills were the major type of EC used. There were 21% participants who did not know and 32% who even did not believe that ECs were 100% effective in preventing pregnancies; 21% knew that ECs were more effective the sooner they were taken. Only 31% of the respondents answered that emergency contraception is not abortifacient, and 40% responded no foetal abnormality related to use of ECs. Sixty-two percent of the respondents were in favour of removal of IUCD if the patient became pregnant while 14% were against the idea.

With respect to attitudinal characteristics, only 30.9% of respondents believed that it would lead to promiscuity if ECs were obtained without prescription and 71% believed that access to ECs should be easy. Fifty-four percent of the respondents believed that ECs should be inexpensive, 45.5% believed that ECs should not be available only to victims of rape, 41.8% thought that ECs might affect pregnancy in future, and 58.2% thought that ECs were harmful to the body. The 31.8% of respondents were in favour of discussing with, and 55.5% in favour of ECs use in their patients.

Regarding practice of ECs, 38.2% agreed that taking increased doses of birth control pills was a mode of EC; 40% did not believe that ECs were effective if taken before sexual intercourse; 36.4% incorrectly felt that ECs were more effective than traditional methods of contraception; 37.3% were not in favour of ECs effectiveness even when taken 72 hours after unprotected sex. About 42% of the respondents showed that IUDs were effective once inserted within 120 hours after unprotected sex.

Table-1: Demographic characteristics doctors of tertiary care hospital

Covariates	Graduate	Postgraduate	Total
Age (yrs)			
<30	35 (31.8)	12 (10.9)	47 (42.7)
>30	16 (14.5)	47 (42.7)	63 (57.3)
Mean Age	**32.44±6.22**		
Gender			
Men	19 (17.3)	35 (31.8)	54 (49.1)
Women	32 (29.1)	24 (21.8)	56 (50.9)
Religion			
Muslim	48 (43.6)	56 (50.9)	104 (94.5
Non Muslim	3 (2.7)	3 (2.7)	6 (5.5)
Marital Status			
Single	22 (20.0)	7 (6.4)	29 (26.4)
Married	29 (26.4)	52 (47.3)	81 (73.6)
No. of Children			
0	9 (8.2)	19 (17.3)	28 (25.5)
1	21 (19.1)	12 (10.9)	33 (30.0)
2	10 (9.1)	21 (19.1)	31 (28.2)
3	6 (5.5)	4 (3.6)	10 (9.1)
>3	5 (4.5)	3 (2.7)	8 (7.3)
Have you ever heard of EC			
Yes	41 (37.3)	46 (41.8)	87 (79.1)
No	10 (9.1)	13 (11.8)	23 (20.9)

Table-2: Response of participants

Covariates	Total n (%)	Logistic Regression OR (95 CI)	*P*
Knowledge of ECs			
How you Hear about EC			
Medical Knowledge	50 (45.5)	1.56 (0.377, 6.486)	0.538
Media/Internet	47 (42.7)	4.17 (0.622, 27.974)	0.14
EC can be obtained from			
Pharmacy	58 (52.7)	0.451 (0.101, 2.020)	0.298
Friend	39 (35.5)	0.353 (0.45, 2.753)	0.320
Type of EC available			
Pills	67 (60.9)	0.14 (0.016, 1.280)	0.082
IUCD	19 (17.3)	0.54 (0.089, 3.283)	0.503
Are 100% effective			
Yes	52 (47.3)	0.70 (0.128, 3.931)	0.694
No	35 (31.8)	3.46 (0.587, 20.422)	0.170
More effective the sooner taken			
Yes	23 (20.9)	1.63 (0.347, 7.689)	0.535
No	63 (57.3)	0.35 (0.046, 2.697)	0.315
EC Abortifacitent			
Yes	45 (40.9)	0.367 (0.062, 2.180)	0.270
No	34 (30.9)	7.25 (1.045, 50.411)	0.045
Fetal Anomalies with use of EC			
Yes	42 (38.2)	4.16 (0.81, 26.226)	0.085
No	44 (40.0)	4.15 (0.645, 26.783)	0.134
IUCD removed if patient is pregnant			
Yes	68 (61.8)	84.23 (3.37, 210.53)	0.007
No	16 (14.5)	19.13 (2.419, 151.318)	0.005
Attitude towards ECs (Yes)			
Will lead to promiscuity if available without permission	34 (30.9)	2.61 (0.607, 11.238)	0.198
Be easily accessible	78 (70.9)	15.60 (2.376, 102.474)	0.004
Be inexpensive	60 (54.5)	0.16 (0.037, 0.729)	0.017
Be available to victim of rape only	50 (45.5)	1.83 (0.183, 3.817)	0.818
ECs might affect pregnancy in the future	46 (41.8)	3.50 (0.859, 14.303)	0.080
ECs might be harmful to body	64 (58.2)	0.311 (0.074, 1.307)	0.111
Do you support its use	61 (55.5)	0.142 (0.025, 0.804)	0.027
Discussed with patients	35 (31.8)	1.11 (0.290, 4.246)	1.116
Practice of ECs			
Increase doses of birth control pills is a form of EC			
Yes	42 (38.2)	9.53 (1.825, 49.779)	0.008
No	43 (39.1)	4.52 (0.746, 27.504)	0.101
ECs are effective, when taken before sexual intercourse			
Yes	46 (41.8)	1.95 (0238, 3.824)	0.947
No	44 (40.0)	0.06 (0.009, 0.532)	0.011
More effective than traditional methods of contraception			
Yes	46 (41.8)	2.30 (0.509, 10.442)	0.270
No	40 (36.4)	1.07 (0.192, 5.495)	0.937
Pills taken 72 hrs after unprotected sex			
Yes	50 (45.5)	1.97 (0.411, 9.507)	0.395
No	41 (37.3)	5.4 (0.640, 45.589)	0.121
IUDs are effective if inserted 120 hrs after unprotected sex			
Yes	46 (41.8)	0.831 (0.206, 3.353)	0.795
No	42 38.2)	0.352 (0.052, 2.181)	0.262

DISCUSSION

In this sample, 79% of respondents had heard about EC. Studies in the United States of America (USA), United Kingdom (UK) and India conducted in 2008, 1996 and 2010 respectively have reported more than 90% awareness.[15–17] A similar study conducted among Jamaican university students in 2002 reported 84% general awareness of ECs.[18–19] This shows that although awareness was high, but below international standards, however, the study is in agreement with Kongnyuy *et al*[3] and Adhikri *et al*[20] ho showed that 63% of the participants were known to ECs but our results were higher than study conducted in Kenya (39%).[21] The most important sources of information in our study was participants own medical knowledge, while other got the knowledge through media/internet. The influence of internet, as opposed to other media networks is often overlooked.

In our results all respondents did not believe that ECs were 100% effective but believed that emergency contraception is safe and effective. They knew that ECs were available to a small percentage without prescriptions, but most knew that ECs were more effective the sooner they were taken. There is a common misconception that emergency contraception is an abortifacient. Only 30% of the study subjects answered that emergency contraception is not an abortifacient while 29% were unsure. This is of import because it reflects gaps in their knowledge regarding its mechanism and the time frame of use. This is in line with various other studies done by scientists.[18,21,22] Previous research indicates that the primary mode of action of emergency contraception is via pre-implantation mechanism. Emergency contraception, thus, needs to be positioned as an option distinct from abortion. Emergency contraception is a way to prevent the need for abortion for those who knew about it. Forty-seven percent of the study participants thought that insertion of an IUD after fertilization cannot be effective to prevent pregnancy.[8]

More than half (68%) of the participants felt that emergency contraception was not an appropriate topic to discuss at routine consultation probably because of religious reason and, therefore, seldom inform or prescribe emergency contraception. Similar findings are seen in researches done by Xu *et al*[23] and Corbett *et al*[24]. Forty-five percent of the respondent physicians were reluctant to prescribe the emergency contraception pills because of their harmful effects on the body as well as their expense so making them uncomfortable in counselling with the patients. This finding has significant implications. First, those women who need to use these methods may not be able to obtain adequate information from family physicians. Second, they may not provide adequate information during counselling. The opportunity to initiate emergency contraception is time-limited, and therefore, using it soon after unprotected intercourse is critical to its effectiveness. Women must know about it before they need it or quickly upon identification of need. Lower levels of prescription have been found in studies in developing countries. In Nairobi, Kenya, 15% of family-planning service providers reported having prescribed emergency contraception, and 20% of primary healthcare workers recommended emergency contraception in Turkey.[25] Physicians who are uncomfortable prescribing emergency contraception can still refer cases to another

service provider. The 55% of the participants had favourable attitudes towards the accessibility and supported the use of emergency contraception. One of the misconceptions is that EC are only effective when used 72 days after unprotected sex. Multicentre, randomized control studies found that the sooner the first dose was taken, the greater the effectiveness. The failure rate at 72 hours after hormonal EC is approximately 4% which increases to 10−50% at five days.[15] Recent Studies have even confirmed that it is effective up to 120 hours.[26] A World Health Organization (WHO) multicentre randomized trial found that a single low dose of mifepristone, the single- and the two-dose regimens of levonorgestrel are equally efficacious as emergency contraception.[27]

CONCLUSION

Attitude of doctors is positive towards emergency contraception but their knowledge and practices are poor. The programs should target at promotion, education and easy accessible of ECs to prevent unintended pregnancy, unsafe abortion and as backup where regular contraception is not used.

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