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Research Article

Knowledge of, attitude toward and professional experience with emergency contraceptives among physicians in Sikkim, India

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ABSTRACT

Background: Objective of current study was to assess knowledge of, attitude toward and professional experience with emergency contraceptives (EC) among doctors practicing in Sikkim, India.

Methods: Between November 2012 to June 2013, a pre-designed, pretested, self-administered anonymous questionnaire was sent to the doctors practicing in different hospitals of Sikkim. The questionnaire included items on knowledge, attitude, and professional experience of doctors with EC.

Results: Of the 285 doctors invited, 210 (73.7%) returned the questionnaire. Although the entire participant responded that they were aware of EC, objective assessment revealed limited knowledge on various aspects of EC. Correct time frame of EC pills use was aware by 63%, while only 45% were aware of correct dosage regime of levonorgestrel pill. Actual level of knowledge was present only in 48.6% doctors. Misconceptions about EC were common, more than half of the doctors felt that easy availability and promotion might increase sexual promiscuity and discourage use of regular contraceptives. Twenty percent doctor used EC either for themselves or for their spouses. Only 42.4% doctors ever recommended or prescribed EC to their clients. Those who never recommended or prescribed EC, the common reasons offered were their concerns that EC may discourage use of regular contraceptives (63.6%), may increase sexual promiscuity (46.3%) and their inadequate knowledge (43.8%).

Conclusions: Knowledge and professional experience about emergency contraception among participant doctors was inadequate. EC should be included in continuing medical educational programmes, in workshops and seminars for doctors, which would be helpful in creating awareness and remove misconception about EC among doctors.

Keywords: Knowledge, Attitude, Doctors, Emergency contraceptives, Professional experience

INTRODUCTION

Worldwide of the 210 million pregnancies that occur annually, about 80 million (38%) are unplanned, and 46 million (22%) end in induced abortion.¹ Of these procedures 20 million are deemed unsafe.²

Half of all the illegal abortions are conducted in Asian countries.³ This unsafe and illegal abortions are one of the leading causes of maternal mortality in developing world.⁴

India also has a high rate (78%) of unplanned and unwanted pregnancy which result a high rate of induced abortions. Atleast 11 million abortions are conducted in India every year, half of them are conducted in unsafe conditions which result a high rate of maternal morbidity and mortality.⁵ One woman dies every eight minute in India due to unsafe abortions.⁴

Most of the unwanted pregnancies and abortion can effectively be prevented by use of an effective contraception. However no family planning method is

hundred percent effective and people do not always use the methods correctly.⁶

Emergency Contraceptives (EC) are newer methods of contraception used for preventing a pregnancy after an unplanned or unprotected sexual intercourse or when an ongoing contraceptive method fails. Promotion and use of EC at an appropriate time will definitely reduce unwanted pregnancies and in turn will reduce incidence of induced abortions and maternal mortality. The commonly used options are oral hormonal Emergency Contraceptive Pills (ECP) (effective up till 72 hours after intercourse) and intrauterine contraceptive devices (IUCD) (effective up till five days after intercourse).⁷

In India, the levonorgestrel (LNG/Progestin only pill) method has been approved and are now available “over the counter” at all private pharmacies and public centers.⁸ However the use of EC has been hampered in India and other developing countries by lack of adequate knowledge about the use and mechanism of action, as well as fears related to potential misuse and the widely held misconception that it promotes promiscuity.^{8,9}

Though emergency contraception has over the years been proven to be an effective means of preventing unwanted pregnancy, knowledge and use of modern methods is disappointingly low even among healthcare professionals and service providers. There is a common misconception that emergency contraception is an abortifacient as indicated by a study among family physicians in Pakistan where only 33% of the study subjects answered that emergency contraception is not an abortifacient while 42% were unsure.⁹

Lack of appropriate knowledge could lead to wrong advice and prescription by health workers leading to widespread misuse, which could trigger sexual liberty and promiscuity. Also the judgmental attitude of some providers to the needs of their clients is not helpful. Furthermore, negative attitudes toward and inaccurate knowledge of the method among health care providers specially among physicians can pose substantial barriers to women's timely access to the pills in the event of unprotected intercourse.

Little is known about how much medical doctors from eastern Indian state of Sikkim know about EC, what their attitude is toward EC, and their professional experience with EC. The aim of the present survey was to assess knowledge of, attitude toward and professional experience with EC and if or how they practice EC themselves.

METHODS

The state of Sikkim located in the eastern Himalayas became the 22nd state of Indian union and it is the second smallest state of India. There are two referral hospitals in Sikkim, Central Referral Hospital (CRH) - teaching

hospital of Sikkim Manipal Institute of Medical Sciences (SMIMS), and the Sir Thutob Namgyal Memorial (STNM) Hospital at Gangtok, four district hospitals, 24 primary health centers and 147 sub centers in Sikkim. These hospitals provide comprehensive health care to the population of Sikkim. It was a cross-sectional study conducted between November 2012 to June 2013. The study was approved by SMIMS institutional ethics committee. A pre-designed, pretested, self-administered multiple response questionnaire was sent with an invitation letter in a sealed envelope to participate to doctors working in different hospitals of Sikkim.

The questionnaire items consisted standard items used by previous researchers on various aspects of EC including items on knowledge, attitude, practice and professional experience on EC of doctors. Some items were modified and some were adapted from review articles and added to the questionnaire by the principal investigator to suit the context of the study.

All doctors were requested to participate irrespective of their area of specialization. Those who agreed to participate were also requested to fill a consent form and sent back to principal author along with filled questionnaire in the same envelope.

The collected data were thoroughly checked, then entered in an excel spreadsheet (Microsoft, Redmond, WA, USA) for analysis. The method consisted of transcription, preliminary data inspection, and interpretation. Data were analyzed using GraphPad InStat version 3 (GraphPad Software, La Jolla, CA, USA).

RESULTS

Invitations were sent to 285 doctors to participate, of which 210 (73.7%) returned the questionnaire. Most of the participating doctors were between 21-30 years of age (60%), male (56.7%) and unmarried (58.6%). Fifty one percent were graduates (MBBS) and 41.4% constituted practitioners in the rank of consultants and practitioners. Table 1 presents the sociodemographic characteristics of the participants.

To question “are you aware of emergency contraceptives” the entire participant responded that they were aware of emergency contraceptives. Of these, 51.4% responded that they learnt it from medical text books, 27.1% from fellow colleagues and 23.3% from internet, television or radio. Other sources of knowledge were from print media (15.2%) and friends and spouses (4.8%).

To assess in depth and actual level of knowledge we asked ten set of questions on various key issues on emergency contraceptives. Table 2 lists the results on knowledge items. Although 80% respondent correctly identified atleast one method of EC, surprisingly ten participants (4.8%) also listed condom as a method of EC. Correct time frame of EC pills use was aware by 63%, while only

45% were aware of correct dosage regime of LNG pill. Yuzpee regime was aware by only 15%, while common side effects of ECP were aware by 25% participants (Table 2).

Table 1: Demographic profiles and background characteristics of the participants.

Demographic profile	Number	Percent (%)
Age (years)		
21-30	126	60
31-40	47	22.4
41-50	23	11.0
>50	14	6.7
Sex		
Male	119	56.7
Female	87	41.4
Marital status		
Single	123	58.6
Married	87	41.4
Qualifications		
Graduate (MBBS)	107	51.0
Postgraduate (MD/MS/diploma)	103	49.0
Working Positions		
Intern	46	21.9
Medical officers	77	36.7
Consultants	87	41.4
Family		
Nuclear	163	77.6
Joint	47	22.4
Religion		
Hindu	147	70.0
Buddhist	44	21.0
Christian	5	2.4
Others	14	6.7

Table 2: Percentage of the participants who correctly answered questions on EC related knowledge

Items on EC related knowledge	Correct responses	
	Number	Percent
Mechanism of action of EC	138	65.7
Identify atleast one method of EC	169	80.5
Time frame to use ECP	132	62.9
Correct dosage of levonorgestrel pill	95	45.2
Yuzpee regime	31	14.8
Cu-T as a method of EC	63	30.0
Maximum effective method	111	52.9
Efficacy of EC	110	52.4
Doctors prescription is not required to obtain EC	113	53.8
Common side effect of EC	53	25.2

Abbreviation: EC-emergency contraceptives, ECP-emergency contraceptive pills

To find out the actual summarized level of knowledge on EC of doctors, response on each question was first scored, tallied and then the total of each respondent score ranged from 0-10 (0%-100%). The total score for each participant was calculated and then respondents were classified as; inadequate and adequate or good knowledge with respect to their level of EC knowledge. Hence, respondents who scored more than 50% were considered as “adequate or good knowledge” and who scored 0-50% as “Inadequate knowledge”. Based on this summary index, only 48.6% of the doctors had adequate knowledge of it.

Six attitude items on EC were asked to determine the overall attitudes of the participants (Table 3). The items were answered as either “yes”, “no” or “unsure”. Items were mixed up with four positive items expected answers were “yes” while in two negative items expected answers were “no”. To the positive items those who replied “yes” were regarded as having positive attitude (score 1) and those who choose to reply “no” or “unsure” were considered having negative attitude (score 0). Similarly to the negative items those who replied “no” were regarded as having positive attitude (score 1) and those who choose to reply “yes” or “unsure” were considered having negative attitude (score 0). To find out the overall attitude, the responses on each attitude item was first scored, tallied and then the total of each respondent score ranged from 0-6 (0%-100%). A score of 50% and above was considered as “favorable attitude” where as those scored below 50% were thought as having “unfavorable attitude”. Based on this attitude item index 74.3% of the participants who were aware of EC had favorable attitude toward EC.

Table 3: Percentage of participants with positive attitude on EC related items.

Attitude related items on EC	Positive attitude	
	Number	Percent
Is EC beneficial (yes)	184	87.6
Will you use EC if you need it? (yes)	165	78.6
Will you encourage others to use EC if they need it (yes)	152	72.4
Do you support prior hand distribution of EC to prevent unwanted pregnancy (yes)	77	36.7
Do you think providing EC may increase sexual promiscuity? (no)	98	46.7
Do you think providing EC would discourage compliance with regular contraceptives (no)	101	48.1

Abbreviation: EC-emergency contraceptives

Twenty percent participant doctor ever used EC either for themselves or for their spouses. The most commonly used methods were levonorgestrel pill (43%) followed by combined pills (28%). Although 38% participant

experienced some side effect mostly in the form of nausea and/vomiting, 86% were satisfied with the outcome (Table 4).

Table 4: Practice of EC among doctors for themselves/their spouses.

Questions on practice related items on EC	Number	Percent
Have you ever used EC for self/spouse?		
Yes	42	20
No	151	71.9
Does not want to disclose	17	8.1
Method used (n=42)*		
Levonorgestrel only pill	18	42.9
Yuzpee regime	12	28.6
Other method	13	31.0
Experienced side effects (n=16)*		
Nausea/vomiting	16	100.0
Excessive bleeding	2	12.5
Continuation of pregnancy	1	6.3

Abbreviation: EC-emergency contraceptives,

*Multiple responses were allowed

Table 5: Professional experience of doctors with EC.

Questions on professional experience related items on EC	Number	%
Have you ever recommended/prescribed EC?		
Yes	89	42.4
No	121	57.6
Method recommended/prescribed (n=89)*		
Levonorgestrel only pill	55	61.8
Combined oral pills (Yuzpee)	25	28.1
Cu-T	9	10.1
Other	19	21.3
Never recommended/prescribed EC	121	57.6
Barriers in recommending/prescribing EC*		
I feel EC may discourage use of regular contraceptives	77	63.6
I feel EC may promote sexual promiscuity	56	46.3
I do not have adequate knowledge of EC	53	43.8
I am worried about side effects of EC	27	22.3
I fear about outcome of EC use	25	20.7
I have ethical and religious concerns	10	8.3
No reason/does not want to disclose	12	9.9

Abbreviation: EC-emergency contraceptives,

*Multiple responses were allowed

Only 42.4% doctors ever recommended or prescribed EC to their clients. Most commonly recommended method were levonorgestrel pills (62%) followed by combined pill method (28%) and copper intrauterine devices (10%).

Surprisingly, approximately 58% never recommended EC to others. Multiple reasons were offered for not recommending EC to others; the most common reason offered was their belief that recommending EC may discourage in use of regular contraceptives (63.6%). Additionally 46% were concerned that EC may increase sexual promiscuity while 44% offered inadequate knowledge as the reason for not recommending EC to others (Table 5).

DISCUSSION

Emergency contraceptive are now approved by the family welfare department of India and are available at all health centers and private pharmacies.⁸ Knowledge on emergency contraception among doctor is a useful assessment about the impact of their awareness on this important contraceptive method, and has the potential of influencing their professional disposition towards their client.

A number of studies have shown that there is poor knowledge of emergency contraception among health care professionals.¹⁰⁻¹³ In our study all the doctors claimed to be were aware of EC. However, objective assessment revealed limited knowledge of doctors. Actual knowledge was low among doctors. Approximately 37% doctors were not aware of exact time frame to use. Providers need to know that EC has been shown to be effective for up to 72 hours, since turning away a potential candidate who presented at less than 72 hours after intercourse would be unfortunate. Correct dosage of levonorgestrel method was aware by 45%, while Cu-T as a method of EC was aware by only 30%. A study conducted among doctors in Delhi, India revealed although 100% doctor claimed to be aware of EC, actual level of knowledge of doctors was disappointingly low. Twenty percent doctors were aware of Yuzpee regime while levonorgestrel regime was aware by only 6% doctors.¹³

Studies from other developing countries like Mexico, Kenya and Indonesia also revealed a limited knowledge of EC among the health care providers and a need was felt to educate both the public and practitioners about EC.¹⁴⁻¹⁵ The Global consortium for EC is working to expand global access to EC. In Kenya¹⁴ fewer than 50 per cent of the service providers knew about EC, while in Mexico¹⁵ although 74 per cent of the service providers had heard of EC, fewer than 40 per cent knew the correct dosages.

Our study revealed that most (74%) of the doctors had a favourable attitude towards EC. However, misconceptions about EC were common which a hindrance in promoting EC. In the present study 53% doctors felt that easy availability and promotion might increase sexual promiscuity while 52% feared that use of EC might discourage use of regular contraceptives. Similar concerns had been expressed by physicians in the study by other researchers. Singh et al reported in their

study that 47.5% doctors feared that use of EC might promote sexual promiscuity.¹³

About 42% participant doctor ever recommended or prescribed EC to others. This is higher to a study conducted in Nigeria which revealed 32% doctors prescribed EC to their clients.¹² Another study in Karachi, Pakistan reported although 71% doctors were familiar with EC only 40% have actually prescribed emergency contraception.¹⁶

The reasons offered by 57.6% participant who never recommended/prescribed EC were their concerns that EC may discourage use of regular contraceptives, may increase sexual promiscuity, inadequate knowledge, worried about side effects and outcomes. It has already been realized that EC pills are relatively safe, easy to use and free from any major side effects.^{5,6}

A consensus statement on emergency contraception emerged at the conference convened by the Rockefeller Foundation in April 1995 which emphasized the need to educate the health practitioners, family planning service providers and medical students.¹⁷ Information concerning EC, especially its dosage, timing of use, and possible adverse effects, are relatively simple to spread. Basic EC-related information should be an integral part of routine training programmes for doctors in India and other developing countries, and special steps should be taken to enhance dialogue between patient and physician in this regard. There is also an urgent need to design and implement specific health service interventions and policies to increase EC awareness among doctors, both in India and other low-income countries.

A strength of the present study is that it is the first to assess EC knowledge, attitude, and practice among doctors in eastern India. This study has explored in depth knowledge and professional experience of doctors on EC. Nevertheless this study was conducted in a single, eastern state of India. Findings from this study need to be interpreted with caution. The tool used was self-administered and this did not allow for verification and probing of response offered. Similar surveys should be conducted at other locations, in both India and other low-income countries to explore their level of knowledge and barriers in recommending EC to their clients by the physician that can be addressed.

CONCLUSION

Findings of the present study suggest that the precise knowledge about emergency contraception among doctors was inadequate. Proper training is needed to ensure that physicians are comfortable enough with different methods of emergency contraception to prescribe it when the situation warrants. EC should be included in continuing medical educational programmes, in workshops and seminars for doctors, which would be helpful in creating awareness and remove misconception about EC among doctors.

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