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Original Research Article

Knowledge and awareness of emergency contraception among women undergoing medical termination of pregnancy in a tertiary care hospital in Andaman and Nicobar Islands

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ABSTRACT

Background: Emergency contraception (EC) is a safe and cost effective measure, which when used judiciously can avoid unintended pregnancies. This is especially relevant in our country where both population control and unsafe abortions are a serious concern. For any contraceptive to be effective, the general population must have a proper knowledge and a positive attitude towards it. Women who come for medical termination of unwanted pregnancy are the best representatives of this and our study aimed to assess the knowledge and awareness of EC in this group.

Methods: It was a descriptive, cross-sectional study conducted using a predesigned questionnaire among 100 women who came for medical termination of pregnancy at G. B. Pant Hospital, Port Blair. Questions were asked to evaluate their awareness, knowledge and attitude towards EC.

Results: Out of 100 women, only 26 % had heard about EC, mostly from mass media, and seven of these 26 women had correct knowledge of timing of using EC. Four women had used EC before, whereas among others, fear of menstrual irregularity was the major deterrent. A significant association was found between education level and occupation with knowledge of EC.

Conclusions: Although EC is a potent tool to avoid unwanted pregnancies, ignorance and misconceptions regarding EC is unfortunately still prevalent among those who would benefit the most from it. Medical personnel and health workers should be more proactive to propagate benefits of EC and encourage its use, as they are usually the first point of contact to the target population.

Keywords: Abortion, Andaman and Nicobar, Awareness, Emergency contraception, Medical Termination of pregnancy

INTRODUCTION

Population boom has always been a burning problem in our country. Needless to say, this exposes the lack of effective family planning, leading to a growing number of unintended pregnancies. It is estimated that approximately 15.6 million abortions occurred in India in the year 2015 with nearly half of the pregnancies being unintended.¹ A systematic analysis of worldwide data

estimates that approximately 8% of all maternal deaths are attributable to unsafe abortion and its related complications, which is the same for India also.^{2,3} For those couples resorting to abortions, emergency contraception is a viable option to prevent pregnancy after unprotected sexual exposure.

Emergency contraception (EC) refers to methods of contraception that can be used to prevent pregnancy after

unprotected sexual intercourse. Most commonly used EC is Levonorgestrel (LNG) which can be taken as a single dose of 1.5mg, or alternatively, taken in 2 doses of 0.75 mg each, 12 hours apart, within 72 hours of unprotected intercourse. The main mechanism of action of LNG as EC is delaying or inhibiting ovulation.⁴ LNG in form of EC is available as an 'over the counter' drug in pharmacies as well as free of cost in most government hospitals in India since 2003, by the name 'EC pill'. With LNG, rate of pregnancy is 0.4% if started within 24 hours and 2.7% if started within 72 hours which is definitely better than using no contraception at all.⁵

NFHS-4 says only 47.7% of urban and 33.6% of rural women had ever heard of EC, whereas mere 0.4% ever used EC.⁶ This shows the glaring gap between the knowledge, awareness and the practice of EC. This lack of awareness leads to unwanted pregnancies which invariably lead to abortions, whether safe or unsafe, legal or illegal. Education and awareness, as to the very need of emergency contraception, is therefore a practical solution to this problem.

This study aimed to assess the awareness and knowledge regarding emergency contraception among patients visiting the outdoor patient department of our hospital with request for medical termination of pregnancy (MTP) as well as to identify factors contributing to the deficiency of acceptance and usage of EC in reproductive age women in this region.

METHODS

This was a descriptive, cross-sectional study conducted using a predesigned questionnaire among the women attending the Gynaecology OPD for MTP at G. B. Pant Hospital, Port Blair over a period of 6 months from November 2018 to April 2019. All reproductive age women consenting to participate in the study were included, with exception of fetal and maternal indications for MTP according to MTP Act.⁷ A total of 112 women met our criteria, twelve of them did not wish to participate in the study. So, 100 women were interviewed by the investigator.

The questionnaire included socio demographic parameters like age, residence, education, occupation, marital status, number of children, previous abortions etc. They were asked about their contraceptive practices and type of contraceptive used. Their knowledge regarding emergency contraception was assessed and this opportunity was also used for counseling the women, who did not know about EC. Attitude towards EC was assessed by asking whether they will use it in future and recommend it to other women. A total of 19 questions were asked and answers were duly recorded in excel sheet followed by statistical analysis of the data by SPSS software. Association between awareness of EC and level of education and occupation was tested using Chi-square test for significance of association.

RESULTS

The demographic characteristics of the study population were analysed and shown in Table 1.

Table 1: Demographic characteristics.

Parameter	Number (n=100)	%
Age		
18-25 years	29	29%
26-30 years	42	42%
31-35 years	24	24%
More than 35 years	05	05%
Residence area		
Urban	57	57%
Rural	43	43%
Religion		
Hindu	82	82%
Muslim	13	13%
Christian	05	05%
Education		
Uneducated	07	07%
Primary education	13	13%
Secondary education	44	44%
Higher secondary and above	36	36%
Occupation		
House wife	79	79%
Student	02	02%
Private worker	10	10%
Government employee	09	09%
Marital status		
Married	98	98%
Unmarried	02	02%
Age at marriage		
Less than 20 years	56	57.14%
20-25 years	35	35.71%
More than 25 years	07	07.15%
Total	98	100%
Number of children		
None (0)	03	03%
One (1)	32	32%
Two (2)	50	50%
Three (3)	09	09%
More than three	06	06%
Age at first pregnancy		
<20 years	39	40.21%
20-25 years	45	46.39%
>25 years	13	13.4%
Total	97	100%

Majority of our patients (42%) were between 26-30 years of age. Most of them (82%) were Hindu by religion. About 57% of the study population came from urban area and 43% from rural regions. Most patients had secondary education (44%) while 36% had higher secondary

qualification or above. About 79% of this group were housewives whereas only 19% were working women. We had two unmarried women and of the ninety eight married women, 50% had two living children. More than half of women (57.14%) were married before 20 years of age.

Table 2: Family planning practices.

Parameter	Number (n=100)	%
Ever terminated pregnancy?		
Once	08	08%
More than once	05	05%
Ever used contraception?		
Yes	74	74%
No	26	26%
Reason for not using any contraceptive		
Lack of knowledge	15	57.69%
Fear of side effect	07	26.92%
Family pressure	04	15.39%
Total	26	100%
Type of contraceptive used?		
Condom	48	64.86%
Oral contraceptive pills (OCP)	16	21.62%
Copper T (CuT)	09	12.16%
DMPA injection	01	01.36%
Total	74	100%
Decision regarding use of contraception		
Self	08	10.81%
Husband	15	20.27%
Family/ In law pressure	06	08.11%
Both	45	60.81%
Total	74	100%
Began use of contraception		
Immediately after marriage	08	10.81%
After one child	45	60.81%
After family is completed	21	28.38%
Total	74	100%

Regarding family planning practices (Table 2), 74% women had ever used any contraception, and it was found most (60.81%) started using contraception only after one child. Among the non-users, lack of knowledge and fear of side effects were most common reasons. There were 13 women who had undergone MTP before, among which five women had done it on more than one occasion. Condom was the most commonly used contraceptive (64.86%) followed by oral contraceptive pills (21.62%). Decision about contraceptive was taken by both partners in 60.8% of cases.

Table 3 represents the knowledge and awareness of the study population towards emergency contraceptives. Only 26% had heard about EC and in them only four women have used EC before. None of the women had any idea of any other method like Copper T acting as EC. Seven of these 26 women had identified the correct

timing of effectiveness of EC (within 72 hours of unprotected sexual intercourse). The source of information of EC was mostly mass media like TV, radio, newspaper (61.54%) and only two women heard about it from health workers (7.69%).

Table 3: Knowledge and attitude towards emergency contraceptives (EC).

Parameter	Number (n=100)	%
Ever heard about EC?		
Yes	26	26%
No	74	74%
Ever used EC?	04	04%
Among those who have heard of EC (n= 26)		
<i>Source of Information regarding EC</i>		
Media (TV/ Radio/ Newspaper)	16	61.54%
Health worker	02	07.69%
Hospital	08	30.77%
<i>Knowledge about timing of EC</i>		
Within 72 hours of unprotected intercourse	07	26.92%
Did not know	19	
Heard about Copper T as EC?	0	0%
<i>Knowledge of indications of using EC</i>		
Failure of barrier methods	05	19.23%
Unprotected sexual intercourse	11	42.31%
Did not know	10	38.46%
<i>Reason for not using EC this time</i>		
EC may cause menstrual irregularity	11	42.31%
EC may affect future fertility	04	15.38%
Unawareness regarding availability	03	11.54%
False sense of security	06	23.08%
Hesitancy to purchase from pharmacy	02	07.69%
<i>After counselling, how many will</i>		
Use it in future and recommend it to others?	21	80.7%
Among those who have not heard about EC (n=74)		
<i>If had previous knowledge of EC, how many</i>		
Would have used it?	48	64.86%
<i>After counselling, how many will</i>		
Use it in future and recommend to others?	57	77%
<i>What could have helped to increase awareness?</i>		
Counselling by health workers	15	20.27%
Advertisement and hoardings	10	13.51%
Health camps	03	04.05%
All of the above	46	62.17%

Among the 26 women who have heard about EC, the most common reason for not using was fear of menstrual irregularity (42.31%) followed by a false sense of security (23.08%). There were 11 women (42.31%) who

knew unprotected sexual intercourse as an indication of EC, and nearly similar percentage of women did not know when to use it (38.46%). For attitude regarding future use and recommendation, 21 out of 26 women who were presently aware of EC were willing to use it and recommend to others. We found 48 out of the 74 women who have not heard about EC, would have used it if they

had prior knowledge, i.e. approximately 65% of these women would have used EC and could have avoided MTP this time. These 74 women had the opinion that counselling by health workers, advertisements, hoardings and health camps can help increase awareness about EC among the general population.

Table 4: Association between level of education and awareness about EC.

Education	Frequency (Percentage)	Heard about EC		Total
		Yes	No	
Uneducated	Count	0	7	7
	% within education	0.0%	100.0%	100.0%
	% within EC	0.0%	9.5%	7.0%
Primary	Count	0	13	13
	% within education	0.0%	100.0%	100.0%
	% within EC	0.0%	17.6%	13.0%
Secondary	Count	8	36	44
	% within education	18.2%	81.8%	100.0%
	% within EC	30.8%	48.6%	44.0%
Higher secondary and above	Count	18	18	36
	% within education	50.0%	50.0%	100.0%
	% within EC	69.2%	24.3%	36.0%
Total	Count	26	74	100
	% within education	26.0%	74.0%	100.0%
	% within EC	100.0%	100.0%	100.0%

Chi-square = 19.202, df = 3, $p < 0.01$, Significant at 1% level of significance

Table 5: Association between occupation and awareness about EC.

Occupation	Frequency (Percentage)	Heard about EC		Total
		Yes	No	
Housewife	Count	15	64	79
	% within occupation	19.0%	81.0%	100.0%
	% within EC	57.7%	86.5%	79.0%
Student	Count	1	1	2
	% within occupation	50.0%	50.0%	100.0%
	% within EC	3.8%	1.4%	2.0%
Working women	Count	10	9	19
	% within occupation	52.6%	47.4%	100.0%
	% within EC	38.5%	12.2%	19.0%
Total	Count	26	74	100
	% within occupation	26.0%	74.0%	100.0%
	% within EC	100.0%	100.0%	100.0%

Chi-square = 9.622, df=2, $p < 0.01$, Significant at 1% level of significance

There was significant association between level of education and awareness (Chi-square = 19.202, $p < 0.01$) as well as between occupation and awareness (Chi-square = 9.622, $p < 0.01$) (Table 4 and 5).

DISCUSSION

For any contraception to be effective, the general population should have proper knowledge and a positive

attitude towards it. Women who come with unwanted pregnancy for MTP are one of the best representatives for assessment of this knowledge. Our study targeted this population for the evaluation of knowledge and awareness of emergency contraception.

Demographically, our study population consisted mostly of the reproductive age group. A total of 74% of our study population had used some form of contraception till

now which was more than some contemporary studies by Mehra et al (66%) and Preeti et al (50%) but lower than the study by Takkar N et al (81.1%).^{5,8,9} This is probably because the latter study was done among the more educated working women whereas most women in our study were housewives. The most common method of contraception used was condom (64.86%), similar to the study by Mehra et al (75%) and far more than Preeti et al (34%).^{5,8} High failure rate of condom was the probable cause of these unwanted pregnancies. Twenty six percentage did not ever use any contraception contrary to 49.34% found in a study from Gujarat, a comparatively optimistic finding.⁵ Lack of knowledge was the main reason as also found by Prachi et al, which only strengthens the well-known fact, lack of education.¹⁰ Both partners actively participated in deciding mode of contraception in most of our cases (60%) which was a very positive finding whereas in a study by Preeti et al, mainly husbands took the decision (40.79%).⁵

EC is vital and comparatively newer concept which can potentially reduce the incidence of unwanted pregnancies. There have been different study groups among patients, undergraduate students and gynaecologists regarding awareness of EC. Studies among college students in India show the awareness regarding EC as 86-100% which is quite satisfactory.¹¹⁻¹⁴ On the contrary, Tripathi R et al, showed that knowledge about EC among doctors is surprisingly inadequate.¹⁵ This corresponds to the results of another study showing a strong misconception regarding EC even among gynaecologists so much so that only 26% had ever prescribed EC.¹⁶

The reluctance to promote or prescribe EC on part of the gynaecologist reflects the lack of awareness among the patients and hence the general population. The studies from all over India show the awareness of EC in general population ranges from 14-22% whereas in a multi-country analysis, overall awareness and practice of EC in India was found to be 10.7% and 0.2% respectively.^{10,17-19} There have been two studies like ours where awareness regarding EC was assessed in women who came for MTP, by Mehra R et al and Yadav P et al showing the awareness of EC in these groups to be as diverse as 1% and 23.68%.^{5,8} Awareness in the former study was so low may be due to the fact that it was done in 2004, soon after introduction of EC in India.

We conducted the study in Andaman and Nicobar Islands, which is separated from the main land by about 1200 kilometres which makes this island quite isolated from main stream. In our study 26% of women were aware about EC and only 60% of those had correct knowledge about indications of use and 4 out of 100 women had used EC in past. Seven women had perfect knowledge about timing but none of them had any idea about any other method being used as EC, similar to a study from Delhi.⁸ Half of the women with higher secondary education or above, were aware of EC.

Working women had a better level of awareness (more than 50%), which is similar to the study by Prateek et al showing awareness of 65%.²⁰ Although the working women are more aware of EC, the awareness doesn't reflect in its practice, as we found 21% of working women using EC, but it still remains better than other studies among working women with practice being only 1.1% and 8.2%.^{9,20} Regarding source of knowledge, all studies point to the mass media being the most common source, our study being no exception. This shows unfortunately, there is lesser encouragement and information from health care providers.

In our study we found that among those who did not know about EC, approximately 65% would have used EC if they had prior knowledge, and after counseling, 77% agreed to use it in future and recommend to others. Another study showed willingness of 83% in study population.¹⁷ These results from various contemporary studies show that once the target population is properly counselled regarding EC and its benefits and the misconceptions cleared, they are more receptive to the idea of using emergency contraceptives. Hence counselling by health workers and medical personnel, advertisements and outreach health camps may have an immense role to play. An analysis by Palermo T et al showed the awareness and practice of EC was very low all over the world.²¹ Developed countries like United States and Australia also face the same problem of underutilisation of EC.^{22,23}

The limitation of our study is that it is with a small sample size and a single centric trial.

CONCLUSION

Although the use of regular contraceptives are the backbone of effective family planning and spacing, emergency contraceptives are a potent but highly underutilised tool, which, with perfect knowledge and use, can potentially reduce many unwanted pregnancies and abortions, which continue to remain an important cause of maternal morbidity and mortality as well as a burden on health care resources. The main hindrance is inadequate or irrational knowledge, or sometimes complete ignorance to the concept of contraception itself. Doctors and other health care professionals should take more initiative as they play a pivotal role in counselling patients at their first contact than what mass media can achieve.

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