Awareness of emergency contraception among first year and final year medical under: Graduates of a private medical college in HP

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Abstract

Introduction: Emergency contraception is the last chance to prevent unintended pregnancy. In countries where emergency contraception (EC) is offered, its availability and use vary widely due to factors such as regulations and policies regarding the method, providers and women’s understanding.

Objectives: 1. To study the awareness of emergency contraception among MBBS students. 2. To compare the awareness among males and females.

Methodology: Questionnaire based, cross-sectional, prospective study carried out and analysed by Chi square test and percentage.

Results: Almost all the students were aware about EC, but their knowledge was incomplete and inaccurate. Final year students and girls were more aware as compared to first year students and boys.

Conclusion: Women and teenagers must be provided with complete knowledge and over the counter availability of EC pills. It’s the need of the hour as the age of first contact is decreasing.

Keywords: Abortion, contraception, emergency, pregnancy, student

Introduction

Emergency contraception is defined as any method women can use after intercourse to prevent pregnancy [1]. Adolescents and young women are at the greatest risk of unintended pregnancy because they are unlikely to see a family planning provider before or immediately after the sexual activity. Therefore, preventing unintended pregnancy among them is the important concern. Sexually active young women are clients with special needs for contraception. They are eligible to use a variety of available contraceptives. Introduction of emergency contraception in the recent past can help them avoid such unintended pregnancies [2].

Adolescence and youth are two stages of development which bridge the gap between childhood and adulthood. These stages bring changes in mental process and personal identity. These include transition from total socio-economic dependence to relative independence. Among these two, an adolescent is the most vulnerable. The generation now entering the adolescence is the largest in human history.

Globally 20 million illegal abortions take place every year and out of this 97% occur in developing countries [3]. In India, 78% of the pregnancies are unplanned and at least 25% are unwanted. Every year 11 million abortions take place and at least half of these are unsafe and associated with a high morbidity and mortality. At least 20,000 women are dying annually due to abortion related complications [4, 5].

EC is especially important for outreach to the 4.5 million women at risk for pregnancy, but not using a regular method by providing a bridge to use of an ongoing contraceptive method. Although ECs don’t protect against STD’s, but they do offer reassurance to the 8.6 million women who rely on condoms for protection against pregnancy in case of condom slippage or breakage.

EC methods available are pills and Cu-T. Pills are COC, POP and anti-progestin pills (Mifepristone). Pills should be taken within 72 hours and Cu-T within 5 days of unprotected coitus [6].

Objectives

1. To check the awareness of emergency contraception among MBBS students of 1st and final year of our institute.
Rationale of the study
Similar study has been conducted in various institutes and there has been no such study in our state. This is the need of the hour as by creating awareness we can save future reproductive health of our nation by saving illegal abortions.

Materials and Methods
This cross-sectional, prospective study was carried out to assess the awareness about emergency contraceptives among students of a private medical college and hospital from July 2017 to October 2017. Study was carried out on subjects giving consent for the study after clearance from institutional ethics committee vide ref no:- MMMC&H/IEC/17/66. A preset Perforama was given to them and collected after they have filled it completely. Exclusion criteria followed was students who refused to give consent were excluded from the study.

Materials and Methods
To remove the bias, questionnaire from one batch were filled and collected on same day. Data regarding socio-demographic variables like age, sex, residential area, parent’s education, religion were obtained.

Following questionnaire was given to both the batches. Format of the knowledge questions included single statements yes or no and multiple choice questions. Participants were asked to choose the best answer in response to multiple choice questions. All questionnaires were anonymous and didn’t have any identifiers.

Questionnaire
Q1. Have you heard of the emergency contraceptive pill, also known as the morning after pill? Yes / No
Q2. How long after having intercourse can the emergency contraceptive pill (Morning after pill) be taken? Up to 12 hours /24 hrs / 48 hrs /72 hrs / don’t know
Q3. How many times can the emergency contraceptive pill be used in a month?
Q4. Is the emergency contraceptive pill 100% effective in preventing pregnancy? Yes/ No/Don’t know
Q5. Does the emergency contraceptive pill also protect against some sexually transmitted infections? Yes /no/ don’t know
Q6. Where can a 16 year old girl get the emergency contraceptive pill? Doctor/ pharmacist /either of the two
Q7. Can a doctor give a girl who is 16, the emergency contraceptive pill without telling her parents? Yes /no/ don’t know
Q8. Does emergency contraceptive pill have serious side effects? Yes / no/ don’t know
Q9. Can the emergency contraceptive pill be used if a woman is already taking the regular contraceptive pill? Yes / No/ Don’t know
Q10. How many tablets of emergency contraceptive pills to be taken after a single act of unprotected intercourse? Single tablet / Two tablets / Multiple / Don’t know
Q11. Do you know any other method of emergency contraception except pills? Yes/ No
Q12. Can Cu-T be used as emergency contraception? Yes/ No.

Statistical analysis
Data collected was entered and analysed using Microsoft excel sheet. For descriptive statistics results were expressed in terms of percentages and association between variables was calculated by using chi-square test and p-value < 0.05 was considered significant.

Results

Table 1: Distribution of students according to gender

<table>
<thead>
<tr>
<th>Batch</th>
<th>Male</th>
<th>Female</th>
<th>Gender Not Revealed (Gnr)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Year</td>
<td>17</td>
<td>33</td>
<td>13</td>
<td>63</td>
</tr>
<tr>
<td>1st Year</td>
<td>40</td>
<td>54</td>
<td>1</td>
<td>95</td>
</tr>
</tbody>
</table>

Table 2: Distribution of students according to questionnaire distribution of students according to q no 1

<table>
<thead>
<tr>
<th>Answer</th>
<th>Final Yr/Istyr Male</th>
<th>Final Yr/Istyr Female</th>
<th>Final Yr/Istyr Gnr</th>
<th>Final Yr/Istyr Total</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>15/36</td>
<td>33/51</td>
<td>0013/001</td>
<td>149</td>
<td>0.0000*</td>
</tr>
<tr>
<td>NO</td>
<td>00/03</td>
<td>00/03</td>
<td>00/03</td>
<td>9</td>
<td>0.2570</td>
</tr>
</tbody>
</table>

Distribution of students according to Q No 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Final Yr/Istyr Male</th>
<th>Final Yr/Istyr Female</th>
<th>Final Yr/Istyr Gnr</th>
<th>Final Yr/Istyr Total</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>upto 24 hrs</td>
<td>00/05</td>
<td>00/06</td>
<td>01/00</td>
<td>12</td>
<td>0.0020*</td>
</tr>
<tr>
<td>upto 48 hrs</td>
<td>01/05</td>
<td>00/05</td>
<td>00/01</td>
<td>13</td>
<td>0.9060</td>
</tr>
<tr>
<td>upto 72 hrs</td>
<td>14/28</td>
<td>32/37</td>
<td>12/00</td>
<td>123</td>
<td>0.0000*</td>
</tr>
<tr>
<td>not known</td>
<td>02/02</td>
<td>00/06</td>
<td>00/00</td>
<td>10</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Distribution of students according to Q No 3

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Final Yr/Istyr Male</th>
<th>Final Yr/Istyr Female</th>
<th>Final Yr/Istyr Gnr</th>
<th>Final Yr/Istyr Total</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>00/00</td>
<td>00/00</td>
<td>00/00</td>
<td>00/00</td>
<td>0.0000*</td>
</tr>
<tr>
<td>Twice</td>
<td>00/00</td>
<td>00/00</td>
<td>00/00</td>
<td>00/00</td>
<td>0.0000*</td>
</tr>
<tr>
<td>&gt;2</td>
<td>00/00</td>
<td>00/00</td>
<td>00/00</td>
<td>00/00</td>
<td>0.0000*</td>
</tr>
<tr>
<td>don’t know</td>
<td>00/00</td>
<td>00/00</td>
<td>00/00</td>
<td>00/00</td>
<td>0.0000*</td>
</tr>
</tbody>
</table>

Distribution of students according to q no 4

<table>
<thead>
<tr>
<th>Answer</th>
<th>Final Yr/Istyr Male</th>
<th>Final Yr/Istyr Female</th>
<th>Final Yr/Istyr Gnr</th>
<th>Final Yr/Istyr Total</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>00/01</td>
<td>00/00</td>
<td>00/00</td>
<td>34</td>
<td>0.5720</td>
</tr>
<tr>
<td>No</td>
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<td>02/04</td>
<td>01/00</td>
<td>113</td>
<td>0.0000*</td>
</tr>
<tr>
<td>don’t know</td>
<td>00/02</td>
<td>00/00</td>
<td>00/00</td>
<td>11</td>
<td>0.0000*</td>
</tr>
</tbody>
</table>

Distribution of students according to q no 5
A total of 158 students participated in study out of total strength of 300 from both the batches. From final year 63 and from 1st year 95. Girls participation was more compared to boys in both the groups as there are more no of girls as compared to boys in both the batches.

Most of the students had heard about emergency contraceptive pill (ECP) suggesting that there is good awareness of its existence among teenagers with significant p-value (0.000). Females (96.55%) were more aware than males (89.47%) about existence of EC. Final year (96.83%) students’ awareness was a little more than first year students (93.68%).

When asked, how long after intercourse the ECP could be taken, girls participation was more compared to boys (92.86%). Here awareness was more among boys (63.16%) as compared to girls (59.77%). Knowledge among first year (93.68%) was more as compared to final year (90.48%).

Regarding the availability of the drug, 57.41% of final year students knew that it can be obtained either from doctor or from pharmacist as compared to first year (31.58%). Only 41.77% were aware about it’s over the counter availability. Boys (40.35%) were a little more aware than girls (39.08%).

When we asked about side effects, only 41.14% knew that EC pill has no serious side effects, only 41.14% knew that EC pill has no serious side effects, thereby reflecting incomplete knowledge. Awareness among females (80.05%) was a little more than boys (73.51%). Awareness among final year (20.63%) was more.

When we asked about side effects, only 41.14% knew that ECP doesn’t protect against STD’s. Knowledge was more among the students who preferred not to reveal their gender (92.86%) and among the students who preferred not to reveal their gender. Only 41.77% were aware about it’s over the counter availability. Boys (40.35%) were a little more aware than girls (39.08%).

Only 10.76% of students were aware that a doctor can give the ECP to a 16 year old girl without telling her parents. When asked whether the ECP could be used if a woman was already taking the OCP there was lack of knowledge among males (14.04%) and first year (13.68%). Only (57.6%) of students knew that it can be taken for multiple no of times.

Other methods of emergency contraception were known to final year students, but first year students were unaware of other methods.
methods. Cu-T as an alternative EC was known to final year students, but first year students were totally unaware.

**Discussion**

Number of students from final year who participated in study (63/150) was significantly less than those from first year (95/150). Reason behind less no from final year participating in study is students got detained due to various reasons. Total 158 students participated in study, out of which 87 were females, 57 males and 14 (final 13/15 yr 1) didn’t prefer to reveal their gender.

Our study showed that there was good awareness (94.3%) of existence of EC among medical students (149/158). Similar trend was noted by Archana Chanda et al in year 2016 in a study done on 1st year medical students [7].

While only 61% students were aware, in a study done by Pankaj Kumar Mandal in rural area of Kolkata [9]. Awareness about EC was practically nil in a study done by Monika Gupta et al in a population of females of age group of 18-49 yrs attending OPD at a tertiary care centre in Himachal Pradesh [8]. 100% awareness about EC was present in a study done by Amisha Dogra [10]. Approx. 97% of final year students were aware about its existence. Similar trends were seen in study done by P Radha Kumari et al. (98%) [11]. Source of information among final year students were their study books and teachers and source among first year was found to be media, friends or peers.

Knowledge about correct timing of ECP was there among 78% of students, similar to Archana Chanda et al study’s pattern (82%) whereas only 14.7% students were aware in a study done by Puri S et al. [7, 12] Variation in result was due to interview among medical students only in our study and study done by Archana Chanda et al. [7]

Only 41% correctly knew about the timing when these pills should be taken i.e. within 72 hours of unprotected intercourse in a study done by Priya Arora et al. [12]

Only 22.4 percent of respondents had heard of ECPs and of these only 17.9 percent knew the correct time-frame for effective use in a study done at Vientiane, the capital city of the Lao PDR [13].

Most of the students were unaware of the number of times it can be used in a year. Only 24% knew about its repeated usage. Awareness among females (23%) and final years (46.03%) were more than boys (19.3%) and 1st years (10.53%) respectively. Similar trend (32%) was seen in study done by Archana Chanda et al. [7]

Students must be aware that ECP is not to be used as routine contraceptive method, but simultaneously they must be told that there is no limit to the number of times it can be used in a year [14]. A potential barrier to women presenting for ECP is the fear that they might be denied it because of overuse [15].

In our study girls (77%) were more aware about efficacy than boys (61%) as seen in Archana Chanda et al. study [7]. The difference in knowledge of males and females may be due to lesser opportunities to receive info and counselling about sexuality, contraception and prevention as they don’t get pregnant and don’t have the need to consult physician for their contraception.

Final year (81%) were more aware about its efficacy than 1st year students (77%) as emergency contraception along with other contraceptive methods is the part of study protocol of final year students. Most (92%) students knew that EC don’t protect against STI’s, but awareness among females (60%) and final years (90%) was little less than males (63%) and first years (94%).

Majority of students didn’t know that it’s over the counter drug and they can get without prescription and without the knowledge of their parents. Confidentiality is an essential part of family planning medicine, but teenagers should be encouraged to inform their parents, but shouldn’t be forced to do so except when child protection becomes an issue [15].

Only 41% of students knew that pills don’t have serious side – effects. Awareness among females (45%) and final year (52%) students were more as compared to males (30%) and first year (37%) students respectively. As males don’t have to use the pills and first year has not studied yet. Although in many situations of missed pills EC is not required, but if pills are missed in middle of menstrual cycle or multiple pills are not taken, there may be risk of pregnancy. Users of OCP’s must be aware that they are not excluded from the use of EC, should they require it [15].

Only 58% students knew that after single act of intercourse one pill is required as most common available or advertised pill is morning after pill. Awareness among boys (58%) and first year (62%) was higher as compared to girls (56%) and final year students (51%). Similarity about more awareness among boys were noted in study by Archana Chanda et al. [7] More awareness among first year may be due to social media. All of final years students were aware of other methods of EC and Cu-T as one of the method for EC, as its part of their curriculum and none among first year student knew about other methods of EC and Cu-T as one of the method as EC. As Cu-T is not being advertised as emergency contraception method anywhere on social media or TV, moreover you can’t get it over the counter and for its use you need to visit health worker.

**Conclusion**

Some young women with unintended pregnancies obtain abortions in unsafe conditions and others carry their pregnancies to term, thereby increasing morbidity and mortality [16]. It’s estimated that EC could prevent 1.7 million unintended pregnancies annually and no of abortions by 40% [17]. In developing countries about 30% women give birth to first child before age of 20 years [18]. In India around 19% of population is of adolescents, of which 90 million are between 15-19 years of age [19]. The average age for first sexual intercourse in India is 17.4 years for boys and 18.2 years in girls [20].

In this study both the groups were aware about the existence of EC, but the knowledge was incomplete and inaccurate. Knowledge of girls and final year students was more accurate. Our reproductive health can be saved by providing accurate knowledge and complete awareness of emergency contraception, over the counter availability and by their liberal use by teenagers and women who don’t want pregnancy.

**References**


