

Emergency contraception — knowledge, attitudes and practice of Portuguese pharmacists

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ABSTRACT

Objective - Emergency contraception can be used following unprotected intercourse, contraceptive failure, incorrect use of contraceptives, or in cases of sexual assault. By selling emergency contraceptive pills (ulipristal acetate and levonorgestrel), pharmacists have a key role in its widespread utilization and prevention of an unwanted pregnancy or an abortion. The objective of this study was to evaluate the knowledge, attitudes and clinical practice regarding emergency contraception by pharmacists in Portugal.

Study design - Cross-sectional descriptive study carried out between January/2014-December/2014; the population was composed of community pharmacists, pharmacy technicians and university students in the last year of graduation in pharmacy, attending a workshop regarding emergency contraception. Data were collected before the workshop by application of a standardized, validated, anonymous questionnaire; 499 questionnaires out of 507 (98%) sent were available for analysis.

Results - All participants knew the existence of emergency contraception, but only 19.4% indicated the three available methods. About 40% reported not having sufficient knowledge for an adequate advice regarding its use; 20.5% considered it an abortifacient. Most responders (336) believe emergency contraception constitutes a "hormonal bomb" while 306 believe that the promotion of its use is associated with a higher incidence of sexually transmitted diseases.

Conclusion - The results of this study suggest that training in this area is essential due to the knowledge gaps and misconceptions detected, which are a barrier for the distribution of emergency contraception pills. The demand for emergency contraception should be an opportunity for contraceptive counseling shared by all health professionals.

Keywords

Emergency contraception; pharmacists; health knowledge; health surveys; women's health

Abbreviations

ACOG - American College of Obstetricians and Gynecologists

Cu-IUD - Copper-bearing intrauterine devices

EC - Emergency contraception

LNG - Levonorgestrel

STD - sexually transmitted disease

UPA Ulipristal acetate

WHO - World Health Organization

Implications

This study points out the main practices, beliefs and misconceptions that are barriers in the provision of emergency contraception, suggesting that it is necessary the promotion of adequate training in this area for all health care providers implied in its distribution, in order to guarantee better access to it.

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Conflicts of interest: none

1 - INTRODUCTION

Emergency contraception (EC) is the only contraceptive method available which can prevent unwanted pregnancy after sexual intercourse. Emergency contraception can be used following unprotected intercourse, contraceptive failure, incorrect use of contraceptives, or in cases of sexual assault [1]. The efficacy of the EC methods available in decreasing the risk of pregnancy has been widely established. If used properly, it has the potential to contribute to the prevention of abortion and, in countries where this is not decriminalized, it can contribute to the reduction of maternal mortality and morbidity from unsafe abortion [2]. Notwithstanding, despite high expectations and the interventions performed to improve access to EC, several studies have shown that they had no impact on the overall reduction of the unwanted pregnancy and abortion rates [3-5].

There are two groups of methods of emergency contraception: emergency contraceptive pills (Ulipristal acetate and Levonorgestrel) and copper-bearing intrauterine device (Cu-IUD), with the copper device being the most effective, followed by the Ulipristal acetate (UPA) and, lastly, Levonorgestrel (LNG) [6]. The LNG pill is considered by the World Health Organization (WHO) as an essential medicine [7].

The use of EC is affected by different variables. In a global context, accessibility is crucial and is influenced primarily by legislation, sale, and price. EC is available in most European countries, however, not only the accessibility varies widely, but also the guidelines and recommendations for its use are not the same, with some countries even not having any recommendations at all [8, 9]. In Portugal, the 1,5 mg LNG pill can be purchased in pharmacies behind-the-counter since 2001 [10]. Since 2007 EC levonorgestrel pills can be purchased over-the-counter in any establishment approved for the sale of medicines, [11, 12] and in June 2015, the ulipristal acetate pill was also authorized to be sold behind-the-counter[11]. Besides easy access, the ways of spreading information regarding different EC options seem to be a key factor for a successfully widespread utilization [3, 4]. The level of knowledge and practice in giving information and providing EC also influences its use. It is essential that women recognize indications for EC and be well informed about it. Another important barrier to the effective use of EC may be an underestimation of the risk of pregnancy. In a recent trial, 14% of the participants reported not using EC on at least one occasion when they thought it might be called for — one of the most common reasons was because they did not know if they needed it [13].

In Portugal, pharmacies are, undeniably, the most frequent place to acquire EC pills, mainly justified by the easy access to them (many are even open 24 hours/day) with a quick,

informal and anonymous approach to the user. The pharmacist plays an essential role in the proper counseling regarding EC and should also take the advantage to opportunistically promote the use of regular methods of contraception. Proper training of these health professionals is essential, since flaws in their knowledge may result in a reduction in the availability and utilization of this method. In Portugal there are no published studies assessing the quality of information provided by pharmaceutics to women seeking for EC. Hence, our goal was to evaluate the level of knowledge, attitudes and clinical practice regarding EC by pharmacists.

2 - MATERIAL AND METHODS

This is a cross-sectional, descriptive study, with data collection between January and December 2014. The study population included community pharmacists, pharmacy technicians and university students in their final year of graduation in Pharmaceutical Sciences. A nonrandom convenience sample was used. The participants voluntarily enrolled in a training workshop on EC, free of any charges, organized by the Portuguese Society of Contraception in different regions of the country. No incentives were offered to complete the survey. Data were gathered prior to the completion of the formative action by applying a standardized, validated and anonymous questionnaire, created specifically for this study. The questionnaire was designed to obtain the following information: demographic data (including age, gender, years in practice and type of provider), knowledge about EC (indications, side effects and efficacy window), attitudes and practices in providing this method, beliefs and opinions. A lead investigator at each workshop site recruited participants and was responsible for the correct filling of the questionnaire.

Data analysis and descriptive statistics were performed using SPSS for Windows (version 22.0).

There was no funding for this study.

3 - RESULTS

From the 507 questionnaires distributed, 8 were excluded for incomplete filling, leaving 499 responses for evaluation.

3.1 Demographic data (Table I):

The majority of the participants were females (86.9%), and the average age was 32 years [20 - 74]; the majority of our population (83.3%) had completed the university degree in

Pharmaceutical Sciences. The average years of professional activity among those who had already completed the academic training was 8.2 [0,5 - 42].

3.2 Knowledge about EC (Table II):

All participants were aware of the existence of EC. The main source of information about EC was the university graduation (61.4%). When asked about the types of EC available in Portugal, 93.7% reported knowing about them — only 19.4% of the participants correctly identified all the existing methods, with only 28% of our sample recognizing the Cu-IUD as an EC method.

With regard to its indications, 87.8% claimed to know them; however, all of the correct indications were marked by only 39% of the respondents. Most (92.9%) of the responders reported knowing the mechanism of action of the hormonal EC - 34.6% of respondents considered delay or inhibition of ovulation as the sole mechanism, 60.8% indicated that it interferes with implantation and 4.6% that it interrupts an ongoing pregnancy. Also, 98.2% of responders recognized the existence of a timing of use of EC after sexual intercourse in order to be effective.

Most (78.1%) of respondents believe that EC has the same eligibility criteria for contraceptive use that combined hormonal contraception; 92% of respondents believes that EC has side effects being the most common: nausea (92.6%) menstrual irregularities and headaches/dizziness (76% and 76,9%, respectively).

3.3 Opinion about EC (Table III)

The majority of the participants (67.4%) consider that the EC is a "hormonal bomb", 20.5% considered it as an abortive method, 41% think that their repeated use may interfere with future fertility and 24.5% believe it has teratogenic effects. On the other hand, a minority of the respondents (10.8%) consider that the EC has fewer contraindications than the contraceptive pill and 65.6% reported being afraid that its use could encourage a reduction in the regular use of contraception methods.

With regard to sexuality, 70.3% believe that their widespread use may increase risky sexual behaviors and 61.3% report that is associated with a higher incidence of sexually transmitted diseases (STDs). However, the majority (66.0%) considers it an important alternative method for the prevention of an unwanted pregnancy and believe that it should be easily accessible for all women.

3.4 Attitudes during the sales of EC (Table IV)

Most respondents (90%) were aware of the over-the-counter availability of EC and 98.4% claimed to know the places to acquire EC. However, 37.3% do not consider themselves comfortable in providing advice about EC. Almost half of the participants were unaware that the EC with LNG is freely available on the National Health Service (Primary Health Care Centers, Gynecology and Obstetrics emergency departments).

4 - DISCUSSION

EC is fundamental as a “last chance opportunity” for preventing an unwanted pregnancy. Our study shows an important lack of adequate knowledge from our population towards EC, limiting its adequate provision.

In Portugal, according to the study “Evaluation of contraceptive practices in Portugal” 87% of the women are aware of EC pills and 17% has already used them. The most used method is oral contraception (58,7%), and 22% of women admit missing pills in all cycles (at least once a month), with the highest rate between young women. In case of pill forgetfulness only 1,7% of women reported the use of any EC method. In the majority of cases, the EC pill was acquired in pharmacies (91%), followed by community health centres (4.5%), general drug stores (3.7%), supermarkets and hospitals (0.4% for both) [14].

Although our respondents were knowledgeable about EC, only 19.4% identified all the available methods; awareness of the most effective EC methods (UPA and the copper IUD) was significantly lower than for LNG. The wider knowledge about the Levonorgestrel pill (consistent with the results from a recent study)[15] may be a reflex of its availability over-the-counter for a long time (around 8 years), of the most recent application of the ulipristal acetate in this context and a lack of knowledge towards intra-uterine devices in general. Although both methods are highly effective the UPA is more effective than the LNG — UPA almost halved the risk of becoming pregnant compared with levonorgestrel in women who received EC within 120 h after sexual intercourse (OR 0.55, 95% CI 0.32–0.93). If EC was used within 24 h of unprotected sexual intercourse, the risk of pregnancy was reduced by almost two-thirds compared with levonorgestrel (OR 0.35, 0.11–0.93) [16].

In our sample, 92.6% of respondents reported knowing the mechanism of action of hormonal EC. Notwithstanding, only 34.6% reported inhibition and delay of ovulation as the only mechanism of action, while 60.8% believe that it interferes with implantation. Published studies support the evidence that the primary mechanism of action of the LNG pills is by blocking or delaying ovulation acting at the early pre-ovulatory phase. Regarding the UPA, when administered before the LH surge it inhibits follicular development in 100% of women. When administered in late pre-ovulatory phase it delays follicular rupture in 44-

59% of the users for a period of 5 to 6 days after treatment. Neither the LNG pill nor the UPA pill can prevent ovulation if given after the LH surge or have been proven to interfere with implantation [17-20].

According to the WHO, the hormonal EC with LNG is safe for all women (category 1). EC does not have any contraindications and, consequently, their use does not present any of the known risks of combined hormonal contraception. The repeated use is rare according to the existing evidence [21], and although not recommended by the WHO, it has no known risks and should not be a reason to limit their access but rather should be an alert to the increased need for contraceptive advice and guidance[2, 22]. Despite the overwhelming evidence available, only a minority of our participants were aware of the absence of contraindications for hormone EC. Evidence suggests that women may hesitate to use EC because of fear of possible side effects [23, 24]. However, adverse effects of EC are rare, similar with the use of UPA and LNG, and in general, transient[16]. The vast majority of our study participants acknowledged its existence (92.1%), and the most reported were nausea and vomiting. On the other hand, 16.3% of our participants believe that EC use increases the risk of extrauterine pregnancy, 20.5% that it is potentially abortifacient and 24.5% that it has teratogenic potential. The existing data indicates that EC does not increase the risk of extrauterine pregnancy and is neither abortifacient nor teratogenic [1, 25-27]. In our study the rate of correct answers on the efficacy and side effects were higher than those identified in other international studies [28], but below the knowledge of pharmaceuticals in Nova Scotia, Canada [29].

Most professionals (70.3%) fear that its use may increase risky sexual behaviors and the incidence of STDs by decreased condom use. These results are refuted by several studies that have shown that easier access to EC does not increase sexual risk behaviors and that its users have no increased risk of contracting STDs [30, 31]. Moreover the opinion of 34.2% of respondents was that EC should not be used by teenagers, a group that may benefit significantly with the use of this method. Easy access to EC by the adolescents does not seem to be related with an anticipation of the onset of sexual activity and its use does not seem to lead to the abandonment of regular contraception, to more frequent unprotected sex or to more frequent use of EC[32].

Our results, like data provided by other international studies, show knowledge gaps that may limit appropriate counseling and can lead to reduced use of EC. Ignorance of its effectiveness window and fear of contraindications or side effects are major drawbacks for the correct counseling regarding it. Of the professionals surveyed, 37.3% report not to be at ease with EC counseling; 33.9% of them justified this insecurity by fear of long term side

effects and 62.8% does not consider themselves sufficiently informed regarding it (see Annex 1 for more information). A considerable percentage acquired their knowledge through books and specialty papers, workshops/seminars and from the internet. This lack of adequate formation compromises the appropriate contraceptive advice from these professionals.

To our knowledge this is the first survey applied to the major group of providers of EC in our country. The availability of EC pills over-the-counter turns pharmacies probably the most attractive places to get access to it, limiting the opportunities of Gynecologists or other health care professionals to give specific advice regarding it. As a consequence the role of pharmacists in our country is extremely important for an adequate provision of EC. Strengths of this study include the application of a validated and precise questionnaire in various regions all over the country enhancing the generalizability of the results. Other strengths of this study are the number of participants (n= 499), with an excellent response rate and their median duration of professional experience (8 years). Lastly, there was a member of the study group delivering the questionnaires during the sessions, ensuring that its filling was adequate. On the other hand, some limitations of this study also need to be acknowledged. The questionnaire was constructed specifically for this survey, which may limit the validity of our findings. Also, the sample may not be representative of all professionals working in community pharmacies in our country because it was a convenience sample composed only of motivated professionals belonging to urban areas who volunteered to participate in the EC workshop. However if this is the case and this truly is a more motivated group, our results may actually be over-estimated and the panorama in our country may be even worse than described here.

5 - CONCLUSION

Pharmacist's providers occupy a privileged place in counseling about EC, because they are on the front line of supplying of the population. This study points out the main practices and beliefs/misconceptions that may constitute barriers to the provision of EC, suggesting that it is essential scientific training in this area, in order to provide proper counseling. EC is safe and effective, effectively expands the options in family planning and can contribute to reduce the number of unplanned pregnancies and abortion rates. Continuing education about EC is paramount and should be a priority for all health professionals working in the field of sexual and reproductive health.

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