

The Views of Nursing Students about the Concern to Use Various Forms of Emergency Contraception

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Abstract

Background: Among methods of emergency contraception there are substances that prevent fertilization, generally by inhibiting ovulation, and means that prevent the implantation of fertilized ovum. Part of women as well as doctors and pharmacists attach recently more attention to choosing one of these measures by metaphysical reasons. The authors of the paper conducted a questionnaire survey aimed at examining how such different attitudes are prevalent among the chosen group of young women in Poland.

Material and Methods: The survey was conducted among 90 female nursing students in three slightly different age groups. A short questionnaire was preceded by a written explanation of the essence of the metaphysical problem.

Results: The use of "emergency contraception", regardless of the type of mechanism of action, i.e. also with tablets preventing the implementation of fertilized cells approve about 55% of women and about 45% allows only the use of ovulation inhibitors.

Conclusion: Due to the obligatory rules of informing patients about the nature of undertaken medical activities, it is advisable to disseminate knowledge about the existing ethical dilemma related to emergency contraception. However, obstructing access to "emergency contraception" due to the conscience clause is difficult to justify rationally, as these increases the likelihood of unwanted pregnancies, which is another next ethical issue.

Keywords: Emergency contraception; Conscientious objection; Public health

Background

Emergency contraception has been used for about 15 years. Initially, drugs such as mifepristone and levonorgestrel were used [1,2]. Several years ago, ulipristal acetate was introduced [3]. It was only in the last 2-3 years that the difference was established between the mechanisms of interaction of these two compounds. This coincided with the heightened objections raised by people with fundamentalist views about the admissibility of emergency contraception pills that work by preventing the implementation of fertilized ovum [4].

This incline to a precise description of the mechanisms of action of these substances and to familiarizing with the views of women and various social organizations regarding the admissibility of the three known kind of emergency contraception. We are trying to do this in this study.

Contemporary state of knowledge concerning the mechanism of action of various forms of emergency contraception

In years 2004-2006, when mifepristone and levonorgestrel were introduced into use, their mechanism of action was not yet fully understood. Gemzell-Danielson wrote at the time: "Taken together available data suggest that emergency contraception with 0.75 mg of LNG twice 12 h apart or a single dose of 1.5 mg of LNG acts mainly to inhibit or delay ovulation. If the effect of emergency contraception is mainly to block the luteinizing hormone surge or to interfere with other processes involved in ovulation is not clear and needs to be further studied" [5]. Gemzell-Danielson [6] wrote "while the main effect of both available, ECPs is to prevent or delay ovulation the window of action for ulipristal acetate (UPA) is wider than that of LNG. This provides the biological explanation for the difference observed in clinical trials and the higher efficacy of UPA. Neither LNG nor UPA impairs endometrial receptivity or embryo implantation."

Later studies, however, have provided an approximation of the difference in the mechanism of action of levonorgestrel and ulipristal acetate [7,8]. Noe et al. [7] investigating the efficacy of levonorgestrel administered before and after ovulation, conclude that this drug works solely by inhibiting ovulation and has no effect preventing the implementation of the fertilized egg. Mozzanega et al. [8] have shown that ulipristal acetate acts on the endometrium and prevents the implementation of the fertilized egg.

Such a clear distinction between the mechanisms of action of these two substances is not entirely certain. In a recent paper published by Peck et al. [9] state that Levonorgestrel has also some post-fertilization effect. They write that this substance "impair luteal function and may adversely affect the survival of the embryo". It is also worth to know the current settlements about the effectiveness of these two emergency contraception methods. On the basis of a review of many studies, Anna Glasier states that the use of levonorgestrel prevents about 50% and ulipristal about 75% of expected pregnancies [10].

Previous studies on the opinion of women and health professionals concerning the admissibility of the use of various forms of emergency contraception

Willetts et al. [11] presented recently in the paper "A survey regarding

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acceptability of oral emergency contraception according to the posited mechanism of action", interesting, rarely analyzed considerations on the different attitudes of women towards Emergency contraception (EC) pills inhibiting ovulation, or preventing implantation or disrupting implantation.

The conducted survey demonstrated only slight differences in the proportions of opinions in the groups of examined women. The cited authors wrote: "women reported that EC would be acceptable if it worked by inhibiting ovulation (89%), preventing implantation (83%) or disrupting implantation (75%)". The questionnaire was distributed among particular, chosen groups of women: (a) presenting for EC at a community pharmacy, (b) attending a clinic for insertion of intrauterine contraception (IUC) or (c) attending a clinic for an induced abortion. It can happen, however, that the opinion about the acceptability of EC "according to the posited mechanism of action" is dramatically different when we are dealing with representatives of conservative, fundamentalist worldview factions.

It is possible to provide a meaningful example. The present Minister of Health of the Polish government announced in February 2017 his intention to ban pharmacists on selling tablets containing ulipristal acetate without a prescription [12]. What is more, after a few days he gave an interview and stated that he as a physician would not prescribe a "day after pill", even to a raped woman, and even if she were his daughter [13]. After some months of legislative endeavors, in June this year the Polish Parliament adopted a special resolution introducing this ban [14].

These controversies were discussed recently in details by Montanari et al. [4]. They write that the essential issue concerns the definition of the beginning of pregnancy. In the scientific papers the beginning of pregnancy coincides with the time of implantation of the fertilized egg in the womb. In this perspective the emergency medication has not an abortive aspect because it acts at a time prior to the implantation of the embryo in the uterus. The opposite understanding is reached if the beginning of pregnancy is considered at the moment of fertilization. From this point of view such drugs should be recognized as abortive.

Montanari emphasize that the pharmaceutical company Shering, which trades levonorgestrel under the name of Levonelle®, explain that the "mechanism is not precisely known" and that "at the given doses it is believed that the drug works mainly by preventing ovulation and fertilization, when sexual intercourse has occurred in the pre-ovulatory phase ... but it can also cause changes in the endometrium that make it unsuitable for implantation of a fertilized egg. It is not effective if the implant has already occurred" [4].

It seems therefore that it is not possible today to give to interested women a clear explanation of the mechanism of action of two most frequently used substances discussed here. The quoted data do not concern at all the opinions about the consent of the emergency

contraception among young women in Poland, so we decided to perform a survey related to this topic.

Methods and Material

This study was conducted among nursing students of three different learning pathways. We assumed that the form should have a preliminary section explaining the basic data related to two most common types of emergency contraception. So we conducted the survey using the following questionnaire design:

A brief questionnaire with a preliminary explanation of the meaning of the questions

Currently, two types of "day after" pills (emergency contraception) are available in Poland. These are: Postinor Duo (levonorgestrel) and EllaOne (ulipristal acetate).

Most studies show that the mechanism of action of Postinor Duo is to inhibit ovulation. This drug is statistically taking less effective than the EllaOne pills due to the fact that using it at the time when ovulation has already occurred it is not effective.

EllaOne pills are more likely to prevent unwanted pregnancy. Previous studies have shown that this substance also inhibits ovulation, but also prevents the implantation of eventually fertilized egg, which occurs when the pill was taken after the ovulation. In the light of these details please kindly to answer (anonymously!!!) on the following questions (Table 1)

The questionnaire was used during teaching activities. Distributing the questionnaire, we asked the students to carefully read the entire form and to respond after.

Groups of surveyed people

The data were collected, using the above presented questionnaire from 90 nursing students studying in the academic year 2016/2017 on three different study paths, namely, day study (first year of study-33 students), weekend study for working students (first year of study-31 persons) and MA studies (in 1st and 2nd year of study-29 participants). The mean age in these groups was 21.6; 36.2 and 42.4 years.

Results

The results are summarized in (Table 1). The obtained data show that in Poland, in the examined group of young women, in the age range, when there is a need for emergency contraception, the views on accepting such procedure differ. Approximately 65% of women approve of long-term hormonal contraception. The use of "emergency contraception", regardless of the mechanism of action described above, ie also with tablets containing ulipristal acetate (EllaOne tablets), approves about 55% of women, and about 45% allow only the use of ovulation inhibitors. For a very concrete question "Do you approve the

No	Content of the question	Yes	No	I don't know
1	Do you approve long-term use of hormonal contraception that inhibits ovulation	57 (63.5%)	25 (27.7%)	8 (8.8%)
2	Do you approve the use of "emergency contraception" regardless of the mechanism described above. i.e. also the pill EllaOne	50 (55.5%)	24 (26.7%)	16 (17.8%)
3	Do you approve the use of "emergency contraception" only with a substance inhibiting ovulation (eg. PostinorDuo pills)	42 (46.6%)	36 (40.0%)	12 (13.4%)
4	Do you think that emergency contraception with help of a substance. which prevent implementation of a fertilized egg cell is something inappropriate because of your worldview	22 (24.4%)	58 (64.5%)	10 (11.1%)
5	Do you think that a fertilized ovum (zygote) should be considered as a person in any circumstances.	33 (36.7%)	37 (41.1%)	20 (22.2%)
6	Taking into account the presented information - do you approve the "in vitro" method of infertility treatment?	72 (80.0%)	13 (14.4%)	5 (5.6%)

Table 1: Proportion of answers for the options presented in the applied questionnaire.

emergency contraception with a substance preventing the implantation of fertilized ovum" 24% women answer in a affirmative way. As many as 36% women think that fertilized ovum (zygote) is identical with a human in all circumstances. At least 80% of women endorse the "in vitro" method of infertility treatment.

Comparison of the differences in the proportion of responses received for the options included in the questionnaire between the younger women (first year of study) and older women (for the employed and the MA students) showed no statistically significant differences.

Discussion

The presented survey was conducted using a questionnaire form containing a explaining part related to the problem. We acted in such a way to avoid answers arising from ignorance of ethical controversy. Insertion of this explanation could, however, affect the possibility of making a choice.

The proportion of women accepting emergency contraception through substances that prevent implantation of fertilized ovum in the examined group is significantly lower (55 to 83%) than reported by Willetts et al. [11]

Montanari Vergallo emphasizes that many physicians or pharmacists are inclined to refer to the conscience clause and do not approve the emergency contraception if the substance used prevents implantation of the fertilized egg. However, only 24% of women examined by us think that such an action is reprehensible.

In our opinion, both doctors, pharmacists and also women rarely consider the essence of this ethical dispute. In our other work we have tried to emphasize that this dilemma has a very sophisticated, metaphysical character related to so called "substance view" of the notion of the soul [15,16].

Card et al. [17] in his articles argues moreover that referring to the conscience clause in the case of emergency contraception it difficult to justify rationally. Renouncement from the use of the "day after" pill increases the likelihood of unwanted pregnancy and in some cases leads to abortion. Protection by doctors or pharmacists of potentially ignited oocytes, which sometimes leads to unwanted pregnancies, causes a situation which should all the more evaluated from the point of view of ethical behavior.

Conclusion

- According to obtained data, only half of young women in Poland is accepting the use of "Emergency contraception by means of a substance which prevent the implantation of the fertilized egg cell.

- Probably some women, only after appropriate explanation realizes that the choice of the kind of emergency contraception is associated with an ethical dilemma that is important for those who have a firm point of view on the essence of the fertilized egg cell.

- Due to the current rules of informing the patients about the essence of undertaken medical activities it is appropriate to inform women about the existing ethical dilemma related to emergency contraception.
- Obstructing the access to the use of "emergency contraception" due to the conscientious objections is hardly to justified because it increases the probability of unwanted pregnancies, what constitutes yet another subsequent ethical problem.

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