

The emergency department gynaecologist and emergency postcoital contraception

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Summary

The emergency department gynaecologist is often faced with requests for emergency postcoital contraception.

The physician on duty is usually very busy and does not always have enough time to perform a complete evaluation of the woman's state of health.

The emergency gynaecologist who prescribes postcoital contraception also has a number of other problems to cope with in regard to the pharmacological preparations on the market, the efficacy of various methods, the monitoring of side-effects which are not, always, tolerated by all patients and the outcome of his therapeutic prescription.

All these aspects should be emphasized in the "first aid" counselling offered to the patients.

In conclusion, we consider that any women who decides to use postcoital contraception should have the right to receive assistance of guaranteed quality throughout the period that elapses between taking the drug and the subsequent menstrual cycle. This is not strictly guaranteed by an emergency gynaecological service.

Key words: Gynaecological Emergency Department; Postcoital Contraception.

The action programme of the 1994 Cairo Conference on Population and Development states that "... all couples and all individuals have the basic right to freely and responsibly decide the number of their children and the intervals between their births, and to have the information, education and means to do so" [1].

Nevertheless, contraceptive methods are not responsibly used, and 26% of women applying for a legal abortion have had unprotected sexual intercourse in their pre-ovulatory period [2]. Ninety-three percent of women requesting abortion would have preferred to use emergency contraception to prevent unplanned pregnancy [3], but only 14% knew the correct time interval following sexual intercourse when the "morning after pill" could be used [4].

However, it is also true that postcoital contraception can not and must not be considered a contraceptive method for habitual use, but only in certain conditions (failure or non use of usual forms of contraception) or cases in which its use is limited to a single episode (e.g. sexual assault).

The general term of the "morning after pill" is used to define a postcoital pill, usually composed of estrogens or progestins, or a combination of both, administered in variable doses and at variable times after (and in any case no later than 72 hours) a single episode of unprotected intercourse. The administration of estroprogestins at the dose prescribed by the "Yuzpe protocol" (200 micrograms of ethinylestradiol and, 0.5 milligrams of levonorgestrel in two doses administered 12 hours apart) is effective in 75% of cases [5-7]. Trussel *et al.* [8] made a

meta-analysis of nine studies involving 5,495 women in order to evaluate whether the contraceptive efficiency of Yuzpe's protocol was dependent on the length of time elapsing between the unprotected intercourse and the beginning of treatment (24, 48 or 72 hours). The results showed no significant variation in effectiveness. Levonorgestrel is used as a postcoital contraceptive at a dose of 0.75 mg administered twice at an interval of 12 hours. It is 85% effective [7, 9]. Conversely, the use of estrogens in high doses (1.0-5.0 mg of ethinyl estradiol per day for five days) is 70-80% effective [5, 10]. Danazol, at a dosage of two 200 mg tablets followed by a further two after a 12 hour interval (800 mg) or two tablets followed by a further two after 12 hours and after 24 hours (1,200 mg), has proved to be an effective method of postcoital contraception [11]. Zuliani *et al.* [12] administered danazol to 990 women in 800 mg doses, observing nine pregnancies (1.7%), and to 730 women in 1,200 mg doses, with seven pregnancies (0.8%). In China mifepristone (RU-486) is under experimentation. Administered in a single 600 mg dose no later than 72 hours after unprotected sexual intercourse it guarantees 100% effectiveness [13-15]. Lastly, a meta-analysis of 20 studies carried out on 8,000 women [16] has shown an index of failure for IUDs of less than 1%. An IUD can be inserted up to five days after the estimated day of ovulation (which may be more than five days after intercourse).

The various methods of emergency contraception and their reported efficacy are shown in Figure 1.

The side-effects of estroprogestin administration include: nausea in 50-60% of cases and vomiting in 15-20%. It may also be accompanied by headache, mastodynia, metrorrhagia and abdominal pain [5, 7, 11, 13,

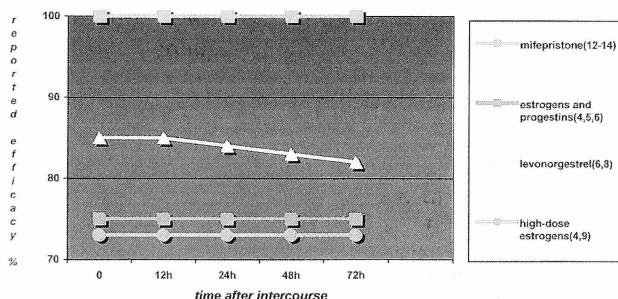


Figure 1. — Reported efficacy of some emergency contraception methods [4-6, 8, 9, 12, 14, 15].

15]. The only serious complication reported has been one case of pulmonary edema after administration of high doses of stilbestrol [17]. Many authors [5, 18, 19] agree that short-term exposure to high doses of estrogens or estroprogestins involves a low or non-existent risk of thromboembolic complications. Nevertheless a thorough anamnesis and evaluation of the state of physical and mental well-being of the woman requesting emergency contraception is necessary both to establish whether there is a real risk of pregnancy and to exclude any absolute contraindications to the use of estroprogestins.

This gives rise to one of the thorniest problems: "Whose responsibility is it to prescribe emergency contraception?" Normally the woman will go to a gynaecological emergency service, a casualty ward, family planning centre or her own general practitioner. In Italy a doctor's prescription is required to purchase estroprogestin preparations in the pharmacy and it is often difficult to obtain in time, particularly at weekends when the number of contraceptive emergency requests is much higher. The waiting time at a gynaecological emergency service is sometimes very long and the physician on duty is usually very busy. He does not always have the time, between one emergency or admission and the next, to make a full evaluation of the woman's state of health and only rarely will he be informed of any subsequent complications or the outcome of his therapeutic prescription. The family planning or outpatient physician follows a different approach: unlike the emergency gynaecologist, he has an opportunity for more frequent contact with the woman, is familiar with her medical history and any clinical contraindications and is able to suggest a follow-up programme, inviting her to inform him of any problems arising after the ingestion of the drug. The emergency gynaecologist that prescribes postcoital contraception also has a number of other problems to cope with:

1) In Italy, unlike other countries like the UK, Germany, Finland, New Zealand, Switzerland, the Netherlands [19], there is no specific emergency contraception drug on the market and so the physician must use pharmacological preparations designed to be administered in very different doses (4 times higher than the normally prescribed daily dose) which could represent a medicolegal risk.

2) Postcoital contraception is ineffective if the woman is already pregnant. This would seem to indicate that, before "prescribing" this drug, it would be advisable to perform a pregnancy test at the emergency centre, particularly in the case of patients with irregular periods, mental disabilities, mythomaniacs or patients who have made incorrect use of their contraceptive method in the preceding period (incorrect dose of estroprogestins, incorrectly adjusted IUD).

3) Three aspects must be emphasized in the counselling offered to patients requesting postcoital contraception:

- clarify that none of the approaches available for use (except mifepristone which is not used in this country) is 100% effective, so that it is important, together with the patient, to assess the risk of conception that, even if low, still exists;

- explain, on the basis of the literature data, that on the offchance pregnancy ensues after the administration of high doses of estroprogestins or danazol, or if the patient was already pregnant at the time of administration, emergency contraception using estroprogestins has no demonstrated effect after implantation [20], and there are no reports in the literature of any teratogenic effects on the foetus [18, 20, 21];

- explain that the methods effective in preventing uterine implantation, although having little or no effect on tubal implantation, result in a reduction of the number of intrauterine pregnancies thus apparently increasing the number of tubal pregnancies [17, 22];

- in cases when more than 72 hours have passed since the alleged fertilizing intercourse, an IUD may be inserted. However, this method has limited application [5].

In the face of "first-aid" counselling, the emergency service gynaecologist should not prescribe postcoital estroprogestins for patients with a positive history of thrombosis or hemicrania due to unknown causes. He must instead invite the patient to use day hospital services or consult their own physician. In all other cases, whenever the emergency service gynaecologist decides to prescribe estroprogestins or estrogens for the purpose of postcoital contraception, he will not however be able to monitor the possible onset of even minor side-effects which may not be tolerated by the patient. The protection of patients having opted for this particular type of contraception would thus not be strictly guaranteed by the emergency gynaecological service. It is also necessary to emphasize that a prescription for postcoital contraception should not be limited to the exclusive specialist sphere. Not only the gynaecologist but also the local general practitioner should be able to give this type of prescription.

In conclusion we consider any woman who decides to use a postcoital contraception method should have the right to receive assistance of guaranteed quality throughout the period that elapses between taking the drug for the first time and the subsequent menstrual cycle. For the reasons stated above, this is not guaranteed by an emergency gynaecological service.

References

- [1] Lo Stato della popolazione nel Mondo: "Fondo delle Popolazioni Unite per la popolazione". Edizione Italiana, AIDOS, 1997.
- [2] Savonius H., Pakarinen P., Sjoberg L., Kajanoja P.: "Reasons for pregnancy termination: Negligence or failure of contraception? ". *Acta Obst. Gynecol. Scand.*, 1995, 74, 818.
- [3] Bromham D. R., Cartmill R. S. V.: "Knowledge and usage of secondary contraception among patients requesting termination of pregnancy". *BMJ*, 1993, 306, 556.
- [4] George J., Turner J., Cooke E.: "Women's knowledge of emergency contraception". *Br. J. Gen. Pract.*, 1994, 44, 451.
- [5] Glasier A.: "Emergency postcoital contraception". *N. Engl. J. Med.*, 1997, 15, 337, 1058.
- [6] Trussel J., Rodriguez G., Ellertson C.: "Updated estimates of the effectiveness of the Yuzpe regimen of emergency contraception". *Contraception*, 1999, 59, 147.
- [7] Task Force on Postovulatory Methods of Fertility Regulation: "Randomised controlled trial levonorgestrel versus the Yuzpe regimen of combined oral contraceptives for emergency contraception". *Lancet*, 1998, 352, 428.
- [8] Trussel J., Ellerston C., Rodriguez G.: "The Yuzpe regimen of emergency contraception: how long the morning after?". *Obstet. Gynecol.*, 1996, 88, 150.
- [9] Guillebaud J.: "Time for emergency contraception with levonorgestrel alone". *Lancet*, 1998, 352, 416.
- [10] Van Santen M. R., Haspels A. A.: "A comparison of high-dose estrogens versus low-dose ethinylestradiol and norgestrel combination in post-coital interception: a study in 493 woman". *Fertil. Steril.*, 1985, 43, 206.
- [11] Rowlands S., Guillebaud J., Bounds W., Booth M.: "Side effects of danazol compared with an ethinylestradiol/norgestrel combination when used for postcoital contraception". *Contraception*, 1983, 27, 1, 39.
- [12] Zuliani G., Colombo U. F., Molla R.: "Hormonal postcoital contraception with an ethinylestradiol-norgestrel combination and two danazol regimes". *Eur. J. Obst. Gynecol. Reprod. Biol.*, 1990, 37, 253.
- [13] Glasier A., Thong K.J., Dewar M., Mackie M., Baird D. T.: "Mifepristone (RU486) compared with high-dose estrogen and progestogen for emergency postcoital contraception". *N. Engl. J. Med.*, 1992, 327, 15, 1041.
- [14] Heikinheimo O., Archer D. F.: "Mifepristone: A potential contraceptive". *Clin. Obstet. Gynecol.*, 1996, 39, 2, 461.
- [15] Derman S. G., Peralta L. M.: "Postcoital contraception: present and future options". *J. Adolesc. Health*, 1995, 16, 6.
- [16] Trussel J., Ellerston C.: "Efficacy of emergency contraception". *Fertil. Control. Rev.*, 1995, 4, 2, 8.
- [17] Morris J. M., van Wagenen G.: "Interception: The use of postovulatory estrogens to prevent implantation". *Am. J. Obstet. Gynecol.*, 1973, 115, 101.
- [18] Poulter N. R., Chang C. L., Farley T. M. M., Meirik O., Marmot M. G.: "Venous thromboembolic disease and combined oral contraceptives: results of international multicentric case-control study". *Lancet*, 1995, 346, 1575.
- [19] Trussel J., Stewart F., Guest F., Hatcher A.: "Emergency contraceptive pills: a simple proposal to reduce unintended pregnancy". *Fam. Plann. Perspect.*, 1992, 24, 269.
- [20] Glasier A., Baird D.: "The effects of self-administering emergency contraception". *N. Engl. J. Med.*, 1998, 339, 1, 1.
- [21] Grou F., Rodrigues I.: "The morning after pill. How long after?". *Am. J. Obst. Gin.*, 1994, 171, 1529.
- [22] Yuzpe A., Kubba A.: "Postcoital contraception". In: "Contraception". Science and Practice, Filshie M., Guillebaud J., editors, London, 1989, 126.

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