Emergency Contraception

Adolescent Medicine Committee, Canadian Paediatric Society (CPS)
Paediatrics & Child Health 1998; 3(5):359-361

Emergency contraception has been in use in North America for over two decades. Often referred to as the morning-after pill, emergency contraception is an effective way to prevent pregnancy after unprotected intercourse. Despite this, many teenaged girls are not aware of its existence or do not know how to obtain it. The term morning-after pill should be avoided because this name implies that it can only be used the next day. Young women may not present for emergency contraception because they think it is too late.
Because neither method of emergency contraception in use will work if implantation has already occurred, these methods are not to be considered as abortifacients.

Emergency Oral Contraception

The most commonly used method is called the Yuzpe method (1) and uses combined high dose estrogen-progestin pills. It is postulated that hormonal emergency contraception works by preventing implantation of a fertilized ovum through changes in the endometrium (2), delaying ovulation or interfering with corpus luteum function (3). Studies indicate that hormonal emergency contraception is very effective (4). Without intervention, eight women in 100 will become pregnant after a single act of unprotected intercourse during the middle two weeks of the menstrual cycle. With emergency contraception, about two women in 100 will become pregnant.

Who can use emergency contraception?

Young women who have attained menarche and have had consensual or nonconsensual unprotected sexual intercourse can be given emergency contraception (Table 1). Adolescents can take emergency contraception if they have no history of stroke, estrogen-sensitive tumour or thrombophlebitis, active liver disease or untreated hypertension. If estrogens are contraindicated (a rare event in adolescents), progestion-only pills can also be considered. A copper-coated intrauterine contraceptive device (IUCD) is a highly effective method of emergency contraception that can be used within 120 h of intercourse. However, it is not usually available in paediatricians' offices or emergency rooms. If it is felt that an IUCD is the only option, prophylactic antibiotic coverage for both gonorrhea and chlamydia should be considered. The IUCD can be removed during or after the next period.

When to take emergency contraception?

Emergency contraception can be used at any time during the menstrual cycle. Most research is based on emergency contraception used within 72 h of intercourse, but it has been suggested that emergency contraception might be effective for up to five days (5). If a young woman presents after three days, emergency contraception can be tried up to 120 h after intercourse, as long as the young woman is informed that it might be less effective. It has been shown that the timing of the initial dose (within the first three days) is not essential (6).

How to prescribe emergency contraception?

Paediatricians, family physicians and others who care for teens should consider having emergency contraceptive pills (ECP) available in the office (Table 2). Some teens will have difficulty getting a prescription filled, and may not be able to manage a visit to both the physician's office and the drugstore.

The most commonly used emergency contraception regimen is two norgestrel-ethinyl estradiol (Ovral, Wyeth Ayerst) tablets given with 50 mg dimenhydrinate initially; the entire dose is repeated 12 h later. The timing of the second dose is important. For practical reasons, the first pills can be delayed so that both doses are given during the teen's normal waking hours. If the second set is missed, the entire course must be repeated.

If norgestrel-ethinyl estradiol is not available, four lower dose oral contraceptive pills, such as norgestimate-ethinyl estradiol (Cyclen, Janssen-Ortho or TriCyclen, Janssen-Ortho [darker blue pills only]) or levonorgesterel-ethinyl estradiol (Triphasil, Wyeth-Ayerst [yellow pills only]) per dose, can be used instead. However, these have not been evaluated in clinical trials.

Short and long term effects

Nausea and vomiting are frequent side effects when ECPs are given without antiemetics. To increase the efficacy of the antiemetic, it can be given 1 h before the hormones. Giving the antiemetic after nausea occurs is not helpful. Adolescents who vomit more than 1 h after taking a dose do not need to retake those pills because absorption has occurred, and the nausea and/or vomiting are likely to be a result of treatment. Breast tenderness, headaches and dizziness are less common side effects of ECP.

Physicians should reassure adolescents that their next period may be either early or delayed, but will probably occur within 21 days of treatment.

Given that no teratogenic risk has been found with pregnancies that occur while women are taking high dose birth control pills, it is unlikely that there is an increased risk of birth defects in babies born to young women who have taken emergency contraception during pregnancy. Pregnancies that occur do not need to be terminated because emergency contraception was used.

For adolescents taking medications that induce liver enzymes, the dose should be increased to three Ovral, taken twice.

Liver Inducing drugs: Carbamazepine, Phenytoin, Barbiturates, Isoniazid, Rifampin, Metronidazole, Tetracycline, Benzodiazepines.

Clinical Practice points

History and physical

Adolescents may come specifically for emergency contraception, or indication for emergency contraception may be discovered during routine history taking. In either case, the date and nature of the last menstrual period should be elicited, as well as when she has had intercourse since that period. She should also be asked about her history of contraceptive use and history of contraindications to oral contraceptives.

Physical examination should include determination of blood pressure. Pelvic examination is indicated if the last menstrual period was unusual and the physician suspects that the patient is pregnant, has concerns about sexually transmitted diseases or if an IUD will be inserted. If a pelvic examination is performed, specimens should be taken for chlamydia and gonorrhea cultures.

Discussion with the teen

After determining whether emergency contraception is indicated, explain the method to the adolescent and the possibility of failure of the method. Explain that the next period might be early, on time or late. Discuss her options should she become pregnant. Explain that if she is going to have intercourse before her next period, she should use a barrier method with a spermicide. If the patient is taking emergency contraception because she has missed birth control pills, she can start a new pack of pills the Sunday after she takes emergency contraception.

Because emergency contraception is not 100% effective, follow-up is important. Teens should be advised to return for a pregnancy test if their next period is more than one week late or if the next period is unusual in any way. They should also return if they have heavy bleeding or pain. An appointment can be scheduled for one week after the next expected menstrual period. This appointment is an opportune time for counselling around the teen's choices about her sexual activity, contraception, sexually transmitted diseases and safer sex. The adolescent can be praised for coming in for emergency contraception, and a suggestion made that she consider another method of preventing pregnancy. If she chooses oral contraceptives, pills and condoms can be given to her with instructions.

Summary

Emergency contraception is an effective way to prevent a pregnancy from occurring following unprotected intercourse. Paediatricians and family physicians should have oral emergency contraception available in the office to give to teens at risk of unwanted pregnancy.

References

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4. Trussell J, Stewart F. The effectiveness of postcoital hormonal contraception. Fam Plan Perspect 1992;24:262-4.
5. Grou F, Rodrigues I. The morning-after pill – How long after? Am J Obstet Gynecol 1994;171:1529-34.
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TABLE 1: Unprotected intercourse and its equivalents
Totally unprotected intercourse
Ejaculation onto genitals
Coitus interruptus
Condom breakage
Intrauterine contraceptive device expulsion or midcycle removal
Spermicide alone at midcycle
More than three missed pills or pills started more than two days late
Missed minipill within 48 h
Sexual assault (not on oral contraceptive pill)
Condom alone or spermacide alone plus recent teratogen exposure

TABLE 2: Emergency contraception pills kit contents
Two envelopes containing two norgestrel-ethinyl estradiol (Ovral, Wyeth Ayerst) and one antiemetic each can be marked with time to take
Information sheet
Number to call if concerns
Appointment card for follow-up