Emergency contraception

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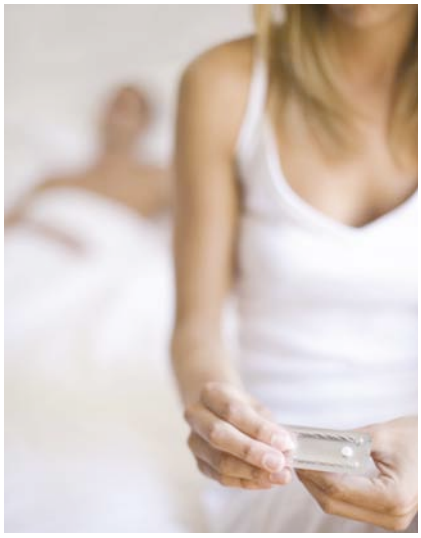

PHOTOLIBRARY

What is emergency contraception?

As sex is often unpremeditated, humans have long sought a method of contraception that is effective after the event. A copper intrauterine device inserted within five days after intercourse will effectively prevent implantation and has been used for this purpose since the mid-1970s. The genesis of modern hormonal contraception dates from 1977, when the Canadian gynaecologist Yuzpe showed that a higher dose of a common birth control pill was effective at preventing pregnancy, provided that it was taken within three days of unprotected sex.[1] The 200 mg dose of ethinyloestradiol required by this regimen was associated with a significant incidence of nausea and vomiting, but it remained the mainstay of emergency contraception for the next 20 years.

In 1998, findings from a large scale multinational study by the World Health Organization (WHO) indicated that a progestogen-only preparation not only provided more effective emergency contraception but was also associated with a lower incidence of side effects.[2] It is this method, using levonorgestrel, that is marketed as Postinor-2 in Australia. Since January 2004, pharmacists here have been permitted to supply emergency contraception without a medical prescription, after providing appropriate counselling. Postinor-2 presently costs about $30 to $35; a slightly less expensive generic version (Levonelle-2) is now available.

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How effective is it?

Results from the WHO study indicate that overall progestogen-only emergency contraception prevents 85% of expected pregnancies when it is commenced within the recommended interval – that is, the first 72 hours after unprotected sex.[2] However, reanalysis of the original data confirmed that treatment failure increases significantly as time passes: when emergency contraception is used within 24 hours of unprotected sex there is a pregnancy rate of 0.5% but this rises to 4.1% by 72 hours.[3]

Who is using it?

Emergency contraception can be used by any woman who does not wish to become pregnant but finds herself in a situation where either she has not used contraception or the contraception used has not been effective. It provides essential backup for women using barrier contraception because of the potential for slippage or breakage, and many using these methods prefer to have the treatment readily at hand in case of accidents. It can also be used when a woman has missed oral contraceptive pills and there are concerns regarding their ongoing efficacy.

How should it be used?

A pack of Postinor-2 comprises two tablets, each of which contains 750 µg levonorgestrel. The manufacturer recommends that the first tablet be taken as soon as possible within 72 hours of unprotected sex and that the second be taken 12 hours later (see the product information). However, a study published in 2002 showed that the treatment retains some effectiveness if taken within 120 hours (five days).[4] It also showed that when the two tablets were taken at once, there was an improvement in patient compliance and effectiveness.[4] It is this latter dosage schedule (i.e. 1500 µg levonorgestrel taken as soon as possible after unprotected sex) that is now recommended by most family planning authorities. A single tablet preparation is expected to replace Postinor-2 later in the year. Contrary to information supplied in the product information, there is no medical contraindication to the use of emergency contraception more than once in a cycle, if required.

It is possible to make up the required amount of levonorgestrel by using the progestogen-only pills Microval or Microlut. These medications are PBS subsidised and therefore less expensive than prepackaged emergency contraception, but they are only available on prescription. A total of 50 pills (30 µg each) must be used to make up the appropriate dose.

What, if anything, needs monitoring?

There are few medical contraindications to the use of progestogens. However, given that emergency contraception has an inherent failure rate it is important that pregnancy be excluded if the woman's next menstrual period is delayed or varies from the usual pattern. Women who have used the treatment after the recommended 72 hours have a higher risk of pregnancy

and should be followed up more closely.

There is also a theoretical concern that, if treatment failure occurs, progestogen-only emergency contraception may increase the relative risk of ectopic pregnancy, although the absolute risk remains low. This is due to its effect on tubal transport of fertilised ova. If there has been possible exposure to sexually transmitted infections (STIs) then microbiological screening is warranted – such tests should be performed about two weeks after exposure because earlier testing may result in a false negative result.

What are the common side effects?

About 2% of women experience nausea after using progestogen-only emergency contraception but this is rarely severe enough to require antiemetics. Some women experience breast tenderness for several days. The most common side effect is a disturbance in the normal bleeding pattern. This ranges from irregular spotting to a change in the timing or duration of the next menstrual period.

What about precautions and interactions?

Hormonal contraception should never be used by a woman who is already pregnant, although there is no evidence of harm to the fetus from a dose of 1500 µg levonorgestrel. The progestogen will not dislodge an established pregnancy, and this contraindication reflects a lack of benefit rather than a safety concern. Emergency contraception should be used with caution in women with a history of hormone-dependent malignancy; this will need to be balanced against the risks of pregnancy.

A mother who is breastfeeding should be informed that approximately 0.1% of the maternal dose of levonorgestrel will be transferred to her baby in the breast milk. Experience with the progestogen-only pills commonly used during breastfeeding suggests that levonorgestrel poses no significant risks to infants, although the dosage required for emergency contraception is higher. Progestogens do not affect the quality or quantity of breast milk.

The efficacy of emergency contraception will be reduced by any medication that induces liver enzyme activity. These include most antiepileptic medications, antitubercular drugs, griseofulvin and the antiretrovirals used to treat HIV. In women using such medications, the present recommendation is that the usual two Postinor-2 tablets be followed up with a third tablet 12 hours later.[5] St John's wort (*Hypericum perforatum*) has been shown to induce liver enzyme activity, and women using this complementary therapy should also be advised to follow the three-tablet regimen, although there is less available evidence for this. There is a single case report of an interaction between warfarin and emergency contraception – the INR should be carefully monitored in women taking both of these agents.[6]

What's the doctor's role today?

The fact that most women now access emergency contraception from the pharmacist has led to a shift in the role played by medical practitioners. One study has suggested that effective use of emergency contraception has the potential to reduce the rate of unintended pregnancy by 50%,[7] but so far this has not been achieved – even in countries where access to the medication is relatively easy. In Australia, one problem is that there has never been an information campaign to inform the population about the availability and safety of emergency contraception. Many women remain unaware of its existence or believe it to be associated with significant risks to their health or future fertility. Medical practitioners remain trusted sources of information, and the availability of emergency contraception should be covered during any general discussion about contraception, particularly when patients opt for less effective methods.

Medical practitioners also play an important role in supporting pharmacists in dealing with more difficult cases where emergency contraception is requested, and they continue to be involved in the provision of ongoing contraception and STI screening. There may be a political role for medical practitioners in lobbying governments and corporations so that what is currently a relatively expensive medication may become readily available to women on limited incomes. Only then will we move closer to the goal of making every pregnancy in this country a wanted one. MT

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DECLARATION OF INTEREST: Dr Foran has been involved in developing and delivering educational programs and consumer product information for various pharmaceutical companies, including Schering, and has on occasions accepted sponsorship from such companies to attend or present at clinical meetings.