EMERGENCY CONTRACEPTION

A recent edition of the *New England Journal of Medicine*[1] carries an interesting approach to a case report on the all-too-common problem of emergency contraception.

The case: 'A healthy 19-year-old woman comes in for a routine appointment. She is sexually active in a monogamous relationship. Pregnancy is not currently desired. Her partner uses condoms most of the time. She is uncertain of the date of her last menstrual period but has had sexual intercourse several times since her last menses, including unprotected intercourse 4 days earlier. A high-sensitivity urine test for pregnancy is negative. Should emergency contraception be prescribed?'

Carolyn Westhoff, from Columbia University, New York, goes on to discuss the problem. The 3 million unplanned pregnancies which occur annually in the USA generally result from non-use of contraception or contraceptive failure and could be prevented with emergency contraception. Immediate use of emergency contraception will reduce a woman's risk of pregnancy to 1 - 2%, the effectiveness depending on the regimen and timing.

There are different types of emergency contraception, and the main types available in South Africa are the progestogen-only regimen, the combined oestrogen-progestogen regimen and the use of a copper IUD if emergency contraceptive pills are contraindicated or vomited within 2 hours (Table I).

Points raised by Westhoff are the following:

Timing of use

Both the combination and progestogen-only regimens were originally studied for up to 3 days after a single unprotected act of intercourse. Data from large randomised controlled trials showed that pregnancy rates were lowest when emergency contraception was initiated within 12 hours of unprotected intercourse. Effectiveness decreased thereafter, with a pregnancy rate of 1% with emergency contraception given within 12 hours, rising to 3% when treatment was given 61 - 72 hours after intercourse. However, other studies have not supported this, and two observational studies have shown that treatment 72 - 120 hours after intercourse results in pregnancy rates similar to those in studies of earlier treatment. This means that emergency contraception should be offered for any act of unprotected intercourse in

Table I. **Types of emergency contraception**

Class	Dose	Brands in *SAMF**
Progestogen only	0.75 mg levonorgestrel, 2 tablets within 72 h and 1 tablet 12 h later	Norlevo (Medi Challenge)
Combined oestrogen-progestogen regimen (Yuzpe method)	100 µg ethinyloestradiol + nogestrel 1 mg 12 hourly for 2 doses, not later than 72 h after unprotected intercourse	2 Ovral (Aspen Pharmacare) tablets
	Ethinyloestradiol + levonorgestrel 2 tablets, not later than 72 h after unprotected intercourse and 2 tablets 12 h later	E-Gen-C (Schering) Alternatively, Nordette (Aspen Pharmacare), 4 tablets 12 hourly for 2 doses
Copper T IUD	Insert up to 120 h after unprotected intercourse	Copper T 380 (Triton Enterprises) Cuprocept (Cuprocept)

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the preceding 5 days. This is true even if the patient has had other acts of unprotected intercourse earlier in the same cycle. Furthermore, treatment is indicated regardless of the day of the cycle on which unprotected intercourse occurred.

Safety of emergency contraception

There is a theoretical concern that using combined oral contraceptives for emergency contraception may increase the risk of thrombotic events which are associated with the long-term use of these products. A search of the literature revealed few cases, although the clinical trials evaluating the products lacked the power to detect rare events and there are no population-based or case-control studies of cerebral thrombosis after emergency contraception.

There are no absolute contraindications to the use of hormonal emergency contraception, even in those women who have contraindications to long-term use of hormonal agents, where the risk of a pregnancy may be greater than the risk posed by the agents. However, Westhoff does say that progestogen-only emergency contraception or an IUD should be considered first in women with medical contraindications to combination oral contraceptives.

Outcomes of pregnancy after emergency contraception

Pregnancies can be established, but not diagnosed at the time of emergency contraceptive use or can result from failure of the emergency contraception. Case reports have described ectopic pregnancy after the use of emergency contraception, but there is no good evidence that there is a causal link between the two. The number of pregnancies which result after emergency contraception have been too few to identify any risk to the fetus as a result of the hormonal agents. However, observational studies have shown that there is no increase in birth defects among pregnancies exposed to daily use of combined oral contraceptives.

Patients who had a recent menstrual period at the usual time and with the usual flow do no require a pregnancy test before using emergency contraception.

Prescribing status

In South Africa all oral contraceptives are available over the counter from a pharmacist, and the products specifically registered for emergency contraception are no exception.

Back to the patient

The patient described in the clinical vignette should receive emergency contraception as soon as possible. The regimen preferred by Westhoff is a progestogen-only contraceptive, which, in South Africa, would be Norlevo. Obviously, the woman should be counselled on regular contraception, along with condom use to reduce the risk of sexually transmitted infections. Hormonal contraception, if chosen, should be started immediately rather than waiting for the next menstrual period. A follow-up pregnancy test is indicated if the patient does not have a withdrawal bleed after finishing her first pack of oral contraceptives, or, for those who do not start taking oral contraceptives, if a period does not occur 3 - 4 weeks after treatment.

1. Westhoff C. *N Engl J Med* 2003; **349:** 1830 - 1834.
2. Gibbon CJ, ed. *South African Medicines Formulary.* 6th ed. Cape Town: Health and Medical Publishing Group, SAMA, 2003.

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