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Review Article

EMERGENCY CONTRACEPTION: A SHORT REVIEW

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ABSTRACT

About half of all pregnancies are unplanned and a significant proportion of unplanned pregnancies are aborted. There are many patients with complications arising from unsafe abortions despite the availability of legal termination of pregnancy services in the authorized clinics. Emergency contraception has the potential to reduce significantly the incidence of unwanted pregnancies and the consequent need for abortion.

Key words: Emergency contraception (EC), progestins, levonorgestrel.

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1.0 INTRODUCTION

Because of the alarming population explosion, effective fertility control drugs are the needs of the day. In the earlier part of twentieth century, the methods of contraception used (condoms, diaphragms, spermicidal creams, foam tablets etc) were intimately related to sexual intercourse, hence, despised by most couples. Introduction of oral contraceptives separated fertility control from coitus. Oral contraceptives are hormonal preparations used for reversible suppression of fertility. Conventional oral contraceptives (combined pills containing an estrogen and a progestin) has the disadvantage that it should regularly be taken daily for 20-22 days followed by suitable gap according to the menstrual cycle and often these can not prevent conception in case of unexpected or accidental exposure e. g. rape. This led to the introduction of emergency contraceptives known as post-coital pills or morning after pills. As emergency contraception (EC) medications was previously termed the "morning after pill", many people interpreted that literally and delayed taking emergency contraceptives until the next morning, thus missing an opportunity to use the method properly.[1]

The rate of unsafe abortion per 100 live births is 14% in Asia, 14% in Africa, 7% in Europe and 32% in Latin America and the Caribbean (WHO 2004).[2] More extensive use of EC could save considerable medical and social costs by reducing unintended pregnancies, which are expensive.[3]

Requests for EC come from two main groups. The first group is already using contraception but has a problem such as condom failure or missed contraceptive pills. The second group does not use contraception because they are not expecting to have sex. It is therefore evident that there must be a system in place to provide a comprehensive and effective post-coital contraception service for all of those people who require it.[4]

2.0 EMERGENCY CONTRACEPTIVE REGIMENS

2.1 Progestins

Contraceptive actions of progestins occur in four ways: [5]

- They affect ovulation in a dose de-pendent manner. This occurs by sup-pressing the mid-cycle peak of leutinising hormone (LH) and follicle stimulating hormone (FSH). As in combined contraceptives, it is the progestin component which provides the contraceptive effect; oestrogen is added only to guarantee a better bleeding regularity.
- Progestins cause the production of a thick cervical mucous plug, which pre-vents the penetration of sperm into the endometrial cavity.
- Progestins transform the endometrium, making it unsuitable for nidation by inhibiting the synthesis of progesterone receptors, thereby in-creasing the stromal tissue and de-creasing the number of glands and stromal oedema.
- Progestins may reduce tubal motility and ciliary action.

Progestogen-only contraceptives have not been associated with an increased risk of venous thrombo-embolic events. The effect of progestogen-only contraceptives on lipoproteins, haemostasis and glucose metabolism is negligible. Therefore, women at increased risk of blood clots can use them safely. The same is true when the risk of arterial thrombotic diseases such as myocardial infarction is considered.[6,7]

In women who smoke heavily, who have elevated blood pressure or are over the age of 40 years, it is safer to use progestogen-only contraceptives than to fall pregnant.

3.0 METHODS OF ADMINISTRATION

- Levonorgestrel 1.5 mg as a single dose as soon as possible after unprotected intercourse and up to 72 hours after the event.
- Levonorgestrel 0.75 mg as soon as possible after unprotected intercourse with a repeat dose of 0.75 mg 12 hours later.
- Combined oral contraceptive pill containing 0.5 mg levonorgestrel and 100 µg of ethinylestradiol (Yuzpe regimen). The pill should be taken as soon as possible after unprotected intercourse and a repeat dose taken 12 hours later.
- Mifepristone 10 mg as a single dose as soon as possible after unprotected intercourse.
- Copper containing intra-uterine contraceptive devices can be inserted as soon as possible after unprotected inter-course, but within 120 hours. This method is probably not ideal in victims of rape.

In a randomized clinical study comparing low dose mifepristone and the Yuzpe regimen in 1000 patients, mifepristone prevented 92% of pregnancies and the Yuzpe regimen prevented only 56% of pregnancies.[8,9]

The three most commonly used emergency contraceptive methods – a single dose of 10 mg mifepristone, a single dose of 1.5 mg levonorgestrel and two 0.75 mg doses of levonorgestrel 12 hours apart, appear to have similar efficacy.[8]

Although emergency contraception should ideally be taken within 72 hours after unprotected intercourse, it can also be taken after 72 hours but within 120 hours of unprotected inter-course. Levonorgestrel 1.5 mg as a single dose has been shown to be very effective up to 120 hours. The patient should be advised that the effectiveness of emergency contraceptives is reduced the longer the interval is between having unprotected intercourse and taking emergency contraceptives.

3.1 EMERGENCY CONTRACEPTIVES IN BREAST-FEEDING WOMEN

The progestogen-only contraceptives do not suppress gonadotropins, nor do they affect the growth of the ovarian follicles during breast-feeding. They have either a positive or no effect on lactation and have no effect on the quality of breast milk.[7]

3.2 EMERGENCY CONTRACEPTION IN PATIENTS WITH LIFE-THREATENING MEDICAL CONDITIONS

Patients with angina, migraine, liver disease, venous and arterial complications, thrombotic diseases, cerebrovascular incidents etc, should be offered emergency contraception as the clinical impact of a single dose or a dual dose of progestogen-only or mifepristone, is little.[7]

The World Health Organisation (WHO) categorizes all these medical conditions as category B, which means that the benefits of using emergency contraceptives in these conditions, generally outweigh the theoretical or proven risks.[10]

4.0 CONCLUSION

There are no absolute contraindications to the use of emergency contraceptives. It is generally advised to offer a single dose of 1.5 mg levonorgestrel or a single dose of 10 mg mifepristone at the time of presentation. Those patients who request prolonged contraception should be offered the copper containing intra-uterine contraceptive device if there are no contraindications to its use. The Yuzpe regimen as a first line method is not recommended now. Here, failure rate is higher, nausea and other side effects are marked, and if pregnancy occurs the offspring bears a high risk.

The WHO working group on contraceptives suggests that a prospective patient should be given an advance supply of emergency contraceptives to ensure that she will have them available when needed and can take them as soon as possible after unprotected intercourse.

With altered life style and changed socio-economic conditions emergency contraception now has been quite commonplace in developed countries, and in urban population of developing countries as a safe, effective and affordable means to prevent unintended pregnancy and thereby abortion liability. If there is no pregnancy, why abortion? Several emergency contraceptives are being available in the market with good patient compliance.

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