

Evidence Assessment: Summary of a Systematic Review

Who is this summary for?

For Health Personal, decision makers and the hospitals managers in charge of mother and child care and family planning.

Interventions for emergency contraception

Key findings

- The copper intrauterine device (IUD) is the most effective emergency contraceptive method and is the only emergency contraceptive method that provides ongoing contraception.
- Where readily available, mifepristone should be the first choice for hormonal emergency contraception (EC). Ulipristal acetate (UPA) seemed slightly more effective than levonorgestrel (LNG) and can be an alternative where this medicine is accessible and affordable.
- Emergency Contraception (EC) should be offered to all women requesting this service even though it should not be used routinely.

Background

Each year, about 44 million pregnancies in the whole world, end in abortion. The usual response to this problem has been contraception or primary prevention, backed up by induced abortion. Emergency contraception is the use of a drug or device to prevent pregnancy after unprotected intercourse. Interest in the development of alternative regimens has led to trials of the progestogen LNG, the anti-gonadotropin danazol, and the anti-progestins mifepristone and ulipristal acetate (UPA). These methods are recommended for use within 72 hours of unprotected intercourse although LNG and mifepristone had been tested up to 120 hours (five days) for research purposes. The postcoital insertion of a copper intrauterine device (Cu-IUD) is an option that can be used up to five days after the estimated time of ovulation and can be left in the uterus as a long-term regular contraceptive method. Information on the comparative effectiveness, safety and convenience of an emergency contraceptive method is crucial for reproductive healthcare providers and the women they serve.

Question

Which emergency contraceptive method following unprotected intercourse is the most effective, safe and convenient to prevent pregnancy?

Interventions for emergency contraception in Cameroon: According to the results of a study conducted in Yaoundé emergency contraception has been shown to prevent about 85% of unintended pregnancy and is therefore one critical way of reducing our high maternal morbidity and mortality rates associated with abortion.

Table 1: Summary of the systematic review

	What the review authors searched for	What the review authors found
Studies	Randomized controlled trials and controlled clinical trials comparing different EC methods, or comparing one method with expectant management or placebo	One hundred randomised controlled trials and controlled clinical trials were found
Participants	Women with regular menses requesting EC following unprotected intercourse. The intervention had to be applied to women seeking EC following unprotected intercourse.	55,666 healthy women with regular menstrual periods with a single act of unprotected intercourse from 48 to 120 hours of attending a maternal and child health or a family planning clinics or general hospital women were included.
Interventions	The following Emergency Contraceptives interventions were included in this review: 1. Any regimen versus nothing/placebo; 2. Hormonal emergency contraceptive pills (ECPs): comparison of different regimens: i) LNG versus Yuzpe, ii) Mifepristone versus LNG, iii) Mifepristone versus Yuzpe, iv) Mifepristone versus anordrin, v) Mifepristone versus mifepristone + anordrin, vi) Mifepristone versus mifepristone + misoprostol, vii) Mifepristone versus mifepristone + tamoxifen, viii) Mifepristone versus danazol, ix) Yuzpe versus high-dose oestrogen, x) Yuzpe versus danazol, xi) UPA versus LNG, xii) Mifepristone versus gestrinone, xiii) Drug/dose comparisons, xiv) Others; 3. IUD comparisons to ECPs.	<ul style="list-style-type: none"> Two studies compared Cu-IUD either directly with an ECP (LNG, mifepristone) or allocated those women attending clinics between 72-120 hours to IUD and those attending before 72 hours to two alternative ECPs randomly. Eighteen out of 100 trials had more than two treatment arms. <ul style="list-style-type: none"> The majority of trials used mifepristone, followed by those using LNG and then the Yuzpe regimen. Thirty-six trials involved dose comparison studies of mifepristone in doses from 5 mg to 600 mg. Thirty-one trials compared LNG with mifepristone. Five trials compared LNG with the Yuzpe regimen. Three trials compared a split dose with a single dose of LNG and one trial compared a 24-hour with a 12-hour double-dose regimen of LNG. Two trials compared UPA, a second-generation progesterone receptor modulator, with LNG. One trial compared mifepristone with gestrinone. Other interventions were high-dose oestrogen, danazol and Cu-IUD.
Controls	Combination treatments and comparison of these with other treatments alone or in combination were considered.	The controls included other types and doses of EC
Outcomes	The primary outcome measure was the pregnancy rate in women receiving different regimens (or control). The full list of outcomes included: 1. Observed number of pregnancies (all women); 2. Ectopic pregnancy; 3. Side effects: any side effect, nausea, vomiting, headache, dizziness, fatigue, breast tenderness, diarrhoea, spotting or bleeding, others. 4. Menses: early, late.	Most of the trials report observed number of pregnancies in comparison to expected number of pregnancies according to estimated probability of pregnancy on the day of the menstrual cycle when unprotected intercourse took place.
Date of the most recent search: July 2011		
Limitations: This is a moderate quality systematic review with few limitations; most of the trials included did not have sufficiently detailed reporting to enable satisfactory methodological quality assessment. .		
Citation: Cheng L, Che Y, Gülmezoglu AM. Interventions for emergency contraception. Cochrane Database of Systematic Reviews 2012, Issue 8. Art. No.: CD001324. DOI: 10.1002/14651858.CD001324.pub4.		

Abbreviations: Cu-IUD: copper intrauterine device; EC: emergency contraception; ITT: intention to treat; IUD: intrauterine device; LNG: levonorgestrel; MCH: maternal and child health; Mife: mifepristone; MTX: methotrexate; UPA: ulipristal acetate.

Applicability

From the one hundred studies included in this review, eighty-six were conducted in China and the others were multicentre trials conducted in Nigeria, UK and US. All the above EC were tested either in China, in Europe and in US. Even if most of these studies were conducted in high and middle income countries, these findings may also be applied in low resources settings.

Conclusions

The available evidences indicated that EC is a safe and effective contraceptive method. The copper IUD for EC could be more effective in preventing unintended pregnancy. Counselling and good service can reduce the risk of 'user failure'. Raising awareness among the general public and healthcare delivery systems could help to maximise the utilisation of EC and increase the effectiveness of the interventions.

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