Advance provision of emergency contraception for pregnancy prevention

01 August 2010

Advance provision of emergency contraceptive pills may not reduce the rates of unintended pregnancy, but it leads to increased use of the method and is not associated with increased frequency of unprotected intercourse. It may be best to promote the use of emergency contraceptive pills among women who are at high baseline risk of pregnancy, (sex workers, adolescents, or women unable to use long-acting or daily contraception).

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1. INTRODUCTION

The copper-bearing intrauterine device and emergency contraceptive pills (ECPs) are the only methods of pregnancy prevention that can be used post-coitally, following coerced or unplanned intercourse or contraceptive failure. In settings where a prescription is required to obtain ECPs, access to a prescription may be a barrier to their timely use. In under-resourced settings, preventing unwanted pregnancies has significant implications for improving child and maternal health and attaining the Millenium Development Goals (MDGs) 4 and 5 (1). Many reasons have been documented for the low use of family planning services (weak health systems and poor access to contraceptive commodities, cultural and religious norms, fear of side-effects, etc.), all of which represent missed opportunities for the health of women (2).

This systematic review (3) evaluates the impact on pregnancy and sexually transmitted infection (STI) rates of provision of ECPs in advance of need compared with a variety of controls.

2. METHODS OF THE REVIEW

The review authors comprehensively searched relevant databases as well as the web site of the International Consortium for Emergency Contraception for randomized controlled trials (RCTs) that compared advanced provision of ECPs with a control group. In addition to pregnancy and STI rates, other outcomes measured included frequency of ECP use, occurrence of unprotected intercourse, use of condoms, use of more effective methods of contraception, delay in taking and correct use of ECPs, and knowledge about ECPs.

The authors performed subgroup analyses of studies by type of ECP regimen used and length of follow-up (6 and 12 months) and clearly assessed the quality of each of the included trials. Sensitivity analysis was performed when included trials reported higher than 20% loss to follow-up.
3. RESULTS OF THE REVIEW

The review includes 11 RCTs involving 7695 women from China, India, Sweden and the USA with sample sizes ranging from 50 to 2000. The ECPs studied differed among sites: seven trials involved 1.5 mg levonorgestrel; one study initially used the Yuzpe regimen (200 µg ethinyl estradiol and 2 mg of norgestrel) and then switched to levonorgestrel, two studies used the Yuzpe regimen (eight tablets 0.15 mg levonorgestrel plus 30 µg ethinyl estradiol and 0.25 mg levonorgestrel plus 50 µg ethinyl estradiol in two doses 12 hours apart), and one study used 10 mg of mifepristone. Follow-up ranged from 3 months to 12 months between studies. The control groups varied significantly between trials and included provision of general counselling (which may or may not have included specific reference to ECPs) or provision of ECPs upon request at a clinic or pharmacy.

Only two studies were adequately powered to detect a difference in pregnancy rates between the intervention and control groups, and none of the studies found a significant difference in pregnancy rates. The combined odds ratio (OR) for pregnancy among women receiving advanced ECPs compared with the control group was 0.98, with the 95% confidence interval (CI) of 0.76–1.25 in studies with 12 months' follow-up, 0.48 (95% CI 0.18–1.29) in a study with 7 months' follow-up, 0.92 (95% CI 0.70–1.20) in studies with 6 months' follow-up, and 0.49 (95% CI 0.09–2.74) for one study with 3 months' follow-up. Four studies measured STI rates. They did not demonstrate significant differences between treatment and control groups (OR 1.01; 95% CI 0.75–1.37).

There was no effect of advance provision on the primary outcomes measured (pregnancy and STI rates), despite an effect on secondary measures such as reported increased frequency of ECP use (single use: OR 2.47; 95% CI 1.80–3.40, and multiple use: OR 4.13; 95% CI 1.77–9.63) and less delay in taking ECPs (faster use) [weighted mean difference (WMD) 12.98 hours; 95% CI 16.66 to 9.31 hours]. In the ten studies that reported ECP use for all participants (combined OR 2.47; 95% CI 1.80–3.40), six studies reported significantly greater ECP use among the advance provision.

Non-use of ECPs among women who became pregnant was reported in four studies and non-use among women who reported unprotected intercourse was reported in three studies. In all studies in which non-use of ECP was reported, non-use was lower among participants in the advance provision group.

Behavioural changes, such as frequency of unprotected intercourse, did not differ between the intervention and control groups for various time frames: (i) in past two weeks, OR 0.84; 95% CI 0.66–1.06; (ii) in past month, OR 0.95; 95% CI 0.46–1.94; (iii) in past three months, OR 0.95; 95% CI 0.46–1.94; and (iv) in past six months, OR 0.96; 95% CI 0.79–1.16.

4. DISCUSSION

4.1. APPLICABILITY OF THE RESULTS

Advance provision of ECPs was associated with increased use of the method, but it did not reduce the rates of unintended pregnancy. Advance provision of ECPs was not associated with behavioural changes such as increased frequency of unprotected intercourse.
Since most of the trials were conducted in high-resource settings, these findings may not represent the effect of advance provision of ECPs in low-resource settings, or where the overall availability and use of contraceptive services is low. The three studies included in the review that were conducted outside the USA or Western Europe (China, Hong Kong Special Administrative Region, and India) are not necessarily representative of settings with significantly low contraceptive prevalence rates. For example, in the study investigating mifepristone ECPs in China, among post-partum women, levonorgestrel was available without a prescription during the study, suggesting a potential for contamination among groups.

4.2. IMPLEMENTATION OF THE INTERVENTION

Mainstreaming ECPs into the sexual and reproductive health programmes in developing countries is an important goal that requires clinicians, policy-makers and programme managers to work together (4). However, this review suggests that advance provision may not be an effective strategy to reduce unintended pregnancies at the population level. Limited resources may be better spent through targeted programmes that promote ECP use among women who are at high baseline risk of pregnancy, namely sex workers, adolescents, or women who decline long-acting or daily contraception for various reasons. Barriers to contraceptive use generally apply also to ECP use and are best addressed using multi-faceted interventions.

4.3. IMPLICATIONS FOR RESEARCH

New ECPs, such as ulipristal acetate, are more efficacious than older ECPs, having a window of effectiveness of up to 120 hours after unprotected intercourse. Moreover, they also have better product labelling than the older ECPs. Further research should include such ECPs to assess whether they reduce pregnancy rates in the populations where they are being used. Further qualitative research on the reasons why women do not use ECPs despite unprotected sex would help to inform targeted programming.

References


This document should be cited as: Brahmi D, Kapp N. Advance provision of emergency contraception for pregnancy prevention: RHL commentary (last revised: 1 August 2010). The WHO Reproductive Health Library; Geneva: World Health Organization.

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