

# The need to take a 'new look' at emergency contraception

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## Background

New developments in hormonal emergency contraception (EC) are likely to cause us to rethink both service delivery and the advice that we give to patients about ongoing contraception.

ellaOne® [30 mg ulipristal acetate (UPA)] has been marketed since October 2009 and is the subject of a previous commentary in this Journal.<sup>1</sup> Biomedical studies incorporating ultrasound scanning of follicle growth and rupture have shown that when given in the immediate pre-ovulatory phase of the cycle (when the risk of pregnancy is greatest), UPA delays ovulation by 5 days (a timeframe that corresponds to the lifespan of spermatozoa in the female reproductive tract) in 59% of women.<sup>2</sup> In contrast, in similar studies using the emergency contraceptive dose of levonorgestrel (LNG) administered at the same time of the cycle, ovulation was delayed for 5 days in only 12% of women – no different from placebo.<sup>3</sup> This strongly suggests that UPA is a more potent inhibitor of ovulation than LNG, which should inhibit ovulation in more women and thus should be more effective as a method of hormonal EC.

## Comparative trial data

To date, there have been two randomised controlled trials comparing UPA and LNG for EC. The first study was conducted in the USA and compared the efficacy of a single dose of 50 mg UPA with 1.5 mg LNG (taken as two 0.75 mg doses 12 hours apart) in women who presented within 72 hours of unprotected sexual intercourse (UPSI).<sup>4</sup> In this study the pregnancy rates following UPA were less than 1% and following LNG 1.7%. This difference was not statistically significant but demonstrated that UPA was at least as effective as LNG. The second study has recently been completed and to date has only been published in abstract form.<sup>5</sup> This study recruited women who presented up to 120 hours (5 days) after UPSI and randomised them to either UPA or LNG. Statistically, there was no significant difference in pregnancy rates between women who received UPA or LNG. However, when the pregnancy prevention rate was calculated, UPA prevented significantly more pregnancies than LNG ( $p < 0.05$ ).<sup>6</sup> A meta-analysis of the two studies was undertaken to increase the number of subjects and thus power to detect a difference between the two treatments. Over the 120-hour time period, UPA had an odds ratio of 0.55 (95% CI 0.32–0.93,  $p = 0.0253$ ) for the risk of pregnancy compared to LNG or, put more simply, prevented almost twice as many pregnancies as LNG.<sup>6</sup>

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## 'Bridging' contraception

Since EC has been made available for purchase 'over the counter' at pharmacies, increasing numbers of women in Britain are choosing to access EC in this way.<sup>7</sup> In Scotland, EC has been free of charge to all women in Scotland, regardless of age, from pharmacies through a patient group direction (PGD) since December 2008. Provisional data for sales of LNG EC show both increasing sales of the PGD preparation and an increase in total sales, suggesting that this initiative has increased both the proportion of women who choose to access EC from pharmacies, but also increased total use of LNG EC (data provided by Bayer Healthcare).

Whilst increasing access to EC may be desirable, it does mean that we have lost the opportunity to discuss ongoing contraception with women, and initiate them on their chosen method, a concept often referred to as 'bridging'. There is growing realisation of the importance of the establishment of ongoing contraception immediately after EC, in view of the two- to three-fold higher risk of pregnancy that has been observed in women who go on to have other episodes of sex in the same cycle as EC has been given.<sup>8</sup> But who is going to start women on an ongoing method of contraception if women choose to attend a pharmacy rather than a contraceptive services provider?

There is also surprisingly little guidance relating to bridging contraception after EC. Existing guidance from the Clinical Effectiveness Unit from April 2006 advises that contraception should be discussed and initiated at any time in the cycle *if it is reasonably certain that the woman is not pregnant*, but does not advise how long abstinence or barrier methods should be used before the woman can rely exclusively on the chosen method.<sup>9</sup> Advice from some clinical experts is that condoms should be used for 7 days (or 2 days for the progestogen-only pill) with a pregnancy test 3 weeks later.<sup>10</sup> With the availability of UPA it is likely, at least in the immediate future, that women will consult a doctor for this EC preparation. Whilst ongoing contraception could be initiated at this visit, there are concerns that as a progesterone receptor modulator UPA may alter the effectiveness of hormonal contraception. The guidance from the manufacturer recommends that abstinence or barrier methods should be used after UPA until the next menses.<sup>11</sup> However, depending upon the time in the cycle when women take EC, this advice could be unnecessarily excessive, given that the half-life of UPA is 32.4 hours, which (in the absence of definitive studies) suggests that 7 days of additional precautions may be sufficient.<sup>11</sup>

## Concluding remarks

Clearly, for providers of contraceptive services, the availability of UPA as a more effective EC than LNG (and one that is licensed for use up to 5 days after UPSI) will be warmly welcomed. However, it may change the flow of the 'tide' of women currently seeking EC from the pharmacy, back to the clinic and the general practitioner's surgery. If not, then effective strategies for bridging contraception from the pharmacy are urgently required. Whilst pilot studies that involve pharmacists supplying oral and lasting and reliable contraceptives are ongoing in parts of England, this approach has not yet been fully evaluated.<sup>12</sup> Research is also required regarding the effects of UPA on the effectiveness of hormonal contraception started

immediately after EC use so that we can give women evidence-based advice on how long additional precautions are needed after EC before they can rely exclusively on their chosen contraceptive method.

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#### References

- Mansour D. ellaOne®: a second-generation emergency contraceptive? *J Fam Plann Reprod Health Care* 2009; **35**: 217–218.
- Croxatto HB, Brache V, Cochon L, Jesam C, Salvatierra AM, Levy D, *et al.* The effects of immediate pre-ovulatory administration of 30 mg ulipristal acetate on follicular rupture. Abstract presented at the 8th Congress of the European Society of Gynecology, Rome, Italy, 10–13 September 2009.
- Croxatto HB, Brache V, Pavez M, Cochon L, Forcelledo ML, Alvarez F, *et al.* Pituitary–ovarian function following the standard levonorgestrel emergency contraceptive dose or a single 0.75-mg dose given on the days preceding ovulation. *Contraception* 2004; **70**: 442–450.
- Creinin MD, Schlaff W, Archer DF, Wan L, Frezieres R, Thomas M, *et al.* Progesterone receptor modulator for emergency contraception: a randomized controlled trial. *Obstet Gynecol* 2006; **108**: 1089–1097.
- Cameron S, Glasier A, Fine P, Mathe H, Gainer E. Ulipristal acetate compared to levonorgestrel for emergency contraception within five days of unprotected intercourse: a randomised controlled trial. Abstract presented at the 8th Congress of the European Society of Gynecology, Rome, Italy, 10–13 September 2009.
- Ulmann A, Scherrer B, Mathe H, Gainer E, HRA Pharma. Meta-analysis demonstrating superiority of the selective progesterone receptor modulator ulipristal acetate versus levonorgestrel for emergency contraception. Abstract and poster presented at the 8th Congress of the European Society of Gynecology, Rome, Italy, 10–13 September 2009.
- Marston C, Meltzer H, Majeed A. Impact on contraceptive practice of making emergency contraception available over the counter in Great Britain: repeated cross sectional surveys. *BMJ* 2005; **331**: 271.
- Cheng L, Gülmezoglu AM, Piaggio G, Ezcurra E, Van Look PF. Interventions for emergency contraception. *Cochrane Database Syst Rev* 2008; **2**: CD001324.
- Faculty of Family Planning and Reproductive Health Care Clinical Effectiveness Unit. FFPRHC Guidance (April 2006). Emergency contraception. *J Fam Plann Reprod Health Care* 2006; **32**: 121–128. [http://www.ffprhc.org.uk/admin/uploads/449\\_EmergencyContraceptionCEUGuidance.pdf](http://www.ffprhc.org.uk/admin/uploads/449_EmergencyContraceptionCEUGuidance.pdf) [Accessed 1 December 2009].
- Glasier A, Gebbie A (eds). *Handbook of Family Planning and Reproductive Healthcare* (5th edn). London, UK: Churchill, 2007; 191–200.
- HRA Pharma UK Limited. ellaOne 30 mg: Summary of Product Characteristics. 2009. <http://emc.medicines.org.uk/medicine/22280/SPC/ellaOne+30+mg/> [Accessed 1 December 2009].
- Pharmacists are to offer the pill in London pilot scheme. *BMJ* 2008; **337**: a3016.



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### Clinical Effectiveness Unit (CEU) Statements

#### Ulipristal Acetate (EllaOne®) Emergency Contraception

The CEU has produced a list of 'Frequently Asked Questions' that is intended as a quick reference guide to the use of ulipristal acetate in UK clinical practice. This document supplements the CEU's New Product Review of ulipristal acetate (October 2009).

#### Anticonvulsant Therapy and Contraception

A Faculty Statement on 'Anticonvulsant Therapy and Contraception' will soon be published. The Statement includes guidance from the Medicines and Healthcare Regulatory Agency, new medical eligibility criteria (UKMEC 2009) and new data on lamotrigine interactions. This document supersedes the Faculty Statement on 'Changes to Prescribing Information for Lamotrigine' (2005).

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### UK Medical Eligibility Criteria for Contraceptive Use (UKMEC) 2009 Edition

The pdf version of UKMEC 2009, together with summary sheets and a summary of changes, are now available on the Faculty website. Printed copies of the publication are to be distributed to all general practices, sexual health and GUM clinics in the UK in early 2010.

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### Local Coordinators for Audit of vLARC Continuation Rates



The Clinical Effectiveness Unit (CEU) would like to hear from any doctor or nurse interested in acting as local coordinator for a national, multicentre audit of very Long-Acting Reversible Contraception (vLARC) continuation rates. Services providing implants and intrauterine methods (including abortion providers) will be eligible to take part. The local coordinator will be responsible for facilitating recruitment and returning baseline questionnaires to the CEU over a short period of time. All other administrative work and follow-up will be undertaken by the CEU. Please contact Dr Susanna Hall, CEU research doctor, for further information. Tel: +44 (0) 141 232 8450 or e-mail: [ceu.members@ggc.scot.nhs.uk](mailto:ceu.members@ggc.scot.nhs.uk)