Evidence Update

Summary of a Cochrane Review

Maternal Health Series

Which emergency contraceptive method is best?

Single dose of mifepristone (25–50 mg) is effective with least side-effects.

Background

Emergency contraception is using a drug or copper intrauterine device to prevent pregnancy shortly after unprotected intercourse.

Inclusion criteria

Studies:

Randomized controlled trials.

Participants:

Women with regular menses requesting emergency contraception following unprotected intercourse.

Intervention:

Intervention: any method of emergency contraception. Control: no intervention or placebo; different formulations: different doses.

Outcomes:

Primary: pregnancy;

Adverse events: early menses, delayed menses, any other adverse event.

Results

- Eighty-one trials of 45,842 women were included; 22 trials had adequate allocation concealment.
- Mifepristone prevented more pregnancies than:
 - the Yuzpe regimen-oestrogen and progestogen within 72 hrs- (relative risk 0.14, 95% confidence interval 0.05 to 0.41; 2144 women, 3 trials)
 - levornogestrel (RR 2.01, 95% CI 1.27 to 3.17; 3743 women, 15 trials)
 - danzanol (RR 0.10, 95% CI 0.02 to 0.55;629 women, 2 trials)
 - ♦ andorin (RR 0.26, 95% CI 0.11 to 0.63; 1035 women, 7 trials).
- Mifepristone was also associated with fewer adverse events.
- In comparisons between mid-dose (25-50 mg) and low -dose (<25 mg) mifepristone, mid-dose was associated with fewer pregnancies (RR 0.67, 95% CI 0.49 to 0.92; 11,432 women, 20 trials) but menstruation was more commonly delayed (RR 1.32, 95% CI 1.15 to 1.51; 10,919 women, 17 trials).
- High dose (> 50 mg) compared with mid-dose mifepristone, (3009 women, 9 trials) was associated with more adverse events and delayed menses, but no additional protection from pregnancy.
- Levornogestrel compared with the Yuzpe regimen was associated with fewer pregnancies (RR 0.51, 95% CI 0.31 to 0.83; 2789 women, 2 trials) and fewer adverse events.

Adapted from Cheng L, Gülmezoglu AM, Piaggio GGP, Ezcurra EE, Van Look PPFA. Interventions for emergency contraception. *Cochrane Database of Systematic Reviews* 2008, Issue 2. Art. No.: CD001324. DOI: 10.1002/14651858.CD001324.pub3. *Evidence Update* published in June 2010.

Levornogestrel vs mifepristone mid-dose (25-50 mg): number of pregnancies

| Study or subgroup | Treatment n/N | Control n/N | Risk Ratio M - H, Fixed, 95% CI | Weight | Risk Ratio M - H, Fixed, 95% CI |
|--|-----------------------|-------------------------|------------------------------------|---------|------------------------------------|
| Han 1999a | 5/144 | 1/70 | | 5.0 % | 2.43 [0.29, 20.41] |
| Hu X 2003 | 4/120 | 2/120 | | 7.4 % | 2.00 [0.37, 10.71] |
| Li A 2000 | 4/111 | 3/116 | | 10.8 % | 1.39 [0.32, 6.09] |
| Li J 2005 | 2/102 | 1/100 | | 3.7 % | 1.96 [0.18, 21.28] |
| Liang 2001 | 4/197 | 2/198 | | 7.4 % | 2.01 [0.37, 10.85] |
| Liao 2003 | 1/100 | 1/100 | | 3.7 % | 1.00 [0.06, 15.77] |
| Qi M 2003 | 9/138 | 2/150 | | 7.1 % | 4.89 [1.08, 22.24] |
| Su 2001 | 5/89 | 2/64 | | 8.6 % | 1.80 [0.36, 8.98] |
| Sun 2000 | 2/100 | 1/100 | | 3.7 % | 2.00 [0.18, 21.71] |
| Sun P 2003 | 8/30 | 2/30 | - | 7.4 % | 4.00 [0.92, 17.30] |
| Wang Q 2000 | 2/63 | 1/68 | | 3.5 % | 2.16 [0.20, 23.23] |
| Wang Y 2003 | 3/127 | 2/132 | | 7.2 % | 1.56 [0.26, 9.18] |
| Xu 2000 | 4/197 | 2/198 | | 7.4 % | 2.01 [0.37, 10.85] |
| Xu Z 2000 | 2/86 | 2/94 | | 7.1 % | 1.09 [0.16, 7.59] |
| Zhang JQ 2000 | 1/205 | 4/394 | | 10.1 % | 0.48 [0.05, 4.27] |
| Total (95% CI) | 1809 | 1934 | • | 100.0 % | 2.01 [1.27, 3.17] |
| Fotal events: 56 (Treatme Heterogeneity: Chi² = 4.8 Fest for overall effect: Z = | 2, df = 14 (P = 0.99) | ; I ² = 0.0% | | | |
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Authors' conclusions

Implications for practice:

Emergency contraception is effective for preventing pregnancy. Mifepristone (25–50 mg) is the most effective and best tolerated hormonal method when compared with other regimens and doses. Levornogestrel is more effective and better tolerated than the Yuzpe regimen.







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