PUBLIC HEALTH

Emergency contraception: a matter of dedication and access

Background and epidemiology: We have known since 1977 that, if a woman takes 2 tablets of an oral contraceptive (norgestrel–ethinyl estradiol) within 72 hours after having sex and 2 more pills 12 hours later, her chances of becoming pregnant are significantly and safely reduced.[1] This Yuzpe method of emergency contraception became known as "the morning-after pill," but this is a misnomer because in reality several pills are taken together and the method is effective for about 3 days after unprotected sex. Suggested mechanisms for its action include disruption of the corpus luteum and endometrial changes that inhibit implantation. These mechanisms work before implantation.

Pharmaceutical companies in Europe were relatively quick to produce and market dedicated products specifically for use as emergency contraception. PC 4 — 4 pills packaged and sold specifically for postcoital use — has been available in the United Kingdom since 1984. Drug companies in North America were slower to respond, raising issues of liability, effectiveness and anticipated reactions from the anti-abortion lobby as possible obstacles.[2]

American physicians, apprehensive about prescribing the oral contraceptive for off-label use, did not do so. As a result, use of emergency contraception in North America during the 1980s and 1990s lagged behind European use, despite growing evidence about its safety and effectiveness.

In 1995 several family-planning, reproductive health and women's organizations in the United States made a concerted effort to increase reproductive choice, avoid pregnancy and reduce the need for abortion. One outcome was a national hotline, launched in 1996, to provide information on emergency contraception and promote consumer awareness and demand. In 1997 the US Food and Drug Administration, in a historic move, issued a notice declaring 6 brands of oral contraceptives safe and effective for use as emergency contraception and published the dosages.[3] In 1998 the first product dedicated for such use received FDA approval and hit the American market.

Clinical management: The most widely used hormonal method in Canada is the Yuzpe regimen (a combination of 100 µg of ethinyl estradiol and 500 µg of levonorgestrel, administered in 2 doses 12 hours apart). Two norgestrel–ethinyl estradiol tablets are equivalent to 1 dose of the Yuzpe regimen. Another product, a progestin-only method known as Plan B, is now available in Canada. Evidence suggests this method has better efficacy and fewer side effects than the Yuzpe regimen,[4] but it costs $15 more.

These methods prevent about 75% to 85% of pregnancies that would have occurred had emergency contraception not been used; this means that about 2% of women who use emergency contraception will become pregnant despite using it. Emergency contraception can be used within 72 hours by any woman at risk of pregnancy from a broken condom, multiple missed birth-control pills, unprotected sex, ejaculation on the external genitalia or sexual assault. Earlier treatment improves efficacy; delaying the first dose from 12 to 24 hours after intercourse increases the odds of pregnancy by 50%. (Women who present after 72 hours and within 5 to 7 days of sexual intercourse can be offered a copper-bearing IUD if there are no contraindications).[5]

Emergency contraception should not be used if a woman knows she is pregnant, although there is no evidence of teratogenicity. Breastfeeding is not a contraindication. The progestin-only regimen is preferred for women with serious risk factors for estrogen use.[5]

A health care professional should discuss with the woman the likelihood of pregnancy, the risk of STDs, the need for ongoing birth control and whether the unprotected sex was coerced. The Yuzpe regimen causes nausea in 50% of users and vomiting in 19%. Taking each dose with food and using antinausea medications such as dimenhydrinate (50 mg) 30 minutes before taking the dose can reduce nausea. Pills are completely absorbed within 1 hour; replacement dosing is needed if vomiting occurs within the hour. The progestin-only regimen causes nausea in 23% of users and vomiting in 6%.[5]

Prevention: Unwanted pregnancies and abortions can be prevented with emergency contraception, and several projects are under way to improve women's access to it. The United Kingdom and New Zealand have taken initiatives to make it available over the counter. In Washington State and British Columbia, and in a pilot project in Toronto, pharmacists are entering collaborative agreements with physicians and nurse practitioners so that women can receive emergency contraception directly from pharmacists without visiting a doctor first. Physicians are also being encouraged to supply sexually active women with prescriptions for emergency contraception that can be filled and kept at home (with due regard for shelf-life) "just in case."[2] — *Erica Weir*, CMAJ

References

1. Yuzpe AA, Lancee WJ. Ethinylestradiol and dl-norgestrel as a postcoital contraceptive. *Fertil Steril* 1977;28:932-6.
2. Coeytaux F, Pillsbury B. Bringing emergency contraception to American women: the history and remaining challenges. *Womens Health Issues* 2001;11:80-86.
3. Food and Drug Administration. Prescription drug products; certain combined oral contraceptives for use as postcoital emergency contraception. *Federal Registrar* 1997;56:203-10.
4. Task Force on Postovulatory Methods of Fertility Regulation. Randomised controlled trial of levonorgestrel versus Yuzpe regimen of combined oral contraceptives for emergency contraception. *Lancet* 1998;352:428-33.
5. Dunn S, Davis V. Emergency Contraception — Summary of the Society of Obstetricians and Gynaecologists of Canada's clinical practice guidelines. *Can Fam Phys* 2001;47:1261-3.