

Postcoital contraception by topical application of some steroidal and nonsteroidal agents.

Am-J-Obstet-Gynecol. 1968 Sep 15; 102(2): 306-7

Kar-AB; Setty-BS; Kamboj-VP

JOURNAL-ARTICLE

Postcoital contraception.**Br-Med-Bull. 1970 Jan; 26(1): 45-51**

Emmens-CW

REVIEW

Postcoital contraception.

Ann-Intern-Med. 1970 Oct; 73(4): 656

Morris-JM

JOURNAL-ARTICLE

Postcoital contraception with diethylstilbestrol.

JAMA. 1971 Oct 25; 218(4): 562-3

Kuchera-LK

JOURNAL-ARTICLE

Postcoital contraception with diethylstilbestrol - updated.

Contraception. 1974 Jul; 10(1): 47-54

Kuchera-LK

JOURNAL-ARTICLE

The hormonal and peripheral effects of d-norgestrel in postcoital contraception.

Contraception. 1974 Oct; 10(4): 411-24

Kesseru-E; Garmendia-F; Westphal-N; Parada-J

JOURNAL-ARTICLE

Postcoital contraception.

Tidsskr-Nor-Laegeforen. 1974 Oct 30; 94(30): 2103-4

Bergsjo-P

JOURNAL-ARTICLE

Postcoital contraception.

Contracept-Fertil-Sex-Paris. 1975 Mar; 3(2): 65-9

Empereire-JC

JOURNAL-ARTICLE

Study of the mechanism of postcoital contraception in the combination of steroids and the central m-cholinolytic, amizil.

Biull-Eksp-Biol-Med. 1975 Oct; 80(10): 80-3

Poskalenko-AN; Makusheva-VP; Nikitin-AI

Experiments on female rats showed the blocking of the M-cholinoreactive system with amizyl to significantly contribute to the estrogen/norsteroid contraceptive effect during the postcoital periods. This effect was accompanied by decrease in the gonadotropin level and by the change in the LH/FSH ratio, this creating an unfavourable background for implantation of the fertilized ovicell in the endometrium. There was a change in the transport rate in the tube and a delay in the decidual reaction. Changes in the rate of the ovicell transport were not accompanied by disturbances in the process of fertilization or with the cytotoxic action. Mestranol and ethynylestradiol in combination with norethynodrel (1:20) and with the central cholinolytic amizyl were agents with future prospects for short-term postcoital contraception.

JOURNAL-ARTICLE

Postcoital contraception--an appraisal.

Popul-Rep-J. 1976 Jan(9 Pt 2): 141-54

Rinehart-W

REVIEW

Luteinizing hormone and progesterone in women under postcoital contraception with D-norgestrel.**Fertil-Steril. 1976 Nov; 27(11): 1250-5**

Garmendia-F; Kesseru-E; Urdanivia-E; Valencia-M

Luteinizing hormone (LH) and progesterone (Pg) levels in blood were measured simultaneously by radioimmunoassay during 53 menstrual cycles in order to investigate the effect of 400 mug of D-norgestrel, administered postcoitally, on pituitary and ovarian function. Of 31 control cycles, 2 appeared to be anovulatory, since the LH peak and subsequent Pg elevation were absent. Twenty-nine cycles showed typical LH surges in the middle of the cycle, followed by a manifold Pg increase. Twelve women received 5 to 13 tables of D-norgestrel. A total absence or at least marked suppression of LH and Pg elevations was observed. In a third group, D-norgestrel was administered on scheduled days. Each woman ingested one to four tablets between the 6th and 18th days of the cycle. Two or more tablets disturbed LH and Pg ovulatory patterns. Of four women who received a tablet on day 10, one failed to show characteristic ovulatory patterns and three exhibited a delay in the time of the LH and Pg increase. These results demonstrate that D-norgestrel in a postcoital regimen alters pituitary and ovarian function, strongly suggesting an antiovulatory effect.

JOURNAL-ARTICLE

Postcoital contraception.

Br-Med-J. 1976 Dec 25; 2(6051): 1562

Hill-DJ

LETTER

Postcoital contraception.

Br-Med-J. 1977 Jan 15; 1(6054): 169

Brewer-C

LETTER

The use of oestrogens for postcoital contraception.

J-Biosoc-Sci. 1977 Jan; 9(1): 83-90

Coles-R

JOURNAL-ARTICLE

Postcoital contraception.

Br-Med-J. 1977 Feb 5; 1(6057): 377

McLaren-HC

LETTER

Postcoital contraception: physiological and clinical parameters.

Obstet-Gynecol-Surv. 1977 Jul; 32(7): 417-37

Aref-I; Hafez-ES

REVIEW

Postcoital contraception using a high-dose depot estrogen (Org 369-2) (Proceedings).

Arch-Gynakol. 1977 Jul 29; 224(1-4): 29

Schindler-AE; Keller-E; Goser-R; Barlas-P; Friedrich-E

JOURNAL-ARTICLE

Postcoital contraception by endometrial aspiration.

Adv-Plann-Parent. 1978; 13(2): 21-6

Eliot-JW; McGregor-D

JOURNAL-ARTICLE

Postcoital contraception in primates. I. Action mechanism of a potential postovulatory fertility-inhibiting substance STS 456 in the baboon (*Papio hamadryas*).

Zentralbl-Gynakol. 1978; 100(5): 263-72

Goncharov-NP; Komor-A; Pachalia-NA; Simarina-AI; Ponsold-K; Grosse-P; Oettel-M; Strecke-J; Schubert-K

With the substance STS 456, an estrogenic active steroid, a high fertility inhibition could be obtained in the pavian, when administered p. o. over a 5 day period postcoital. The effectiveness and also the side effects were dose dependent. The antifertility mechanism is based on an luteolytic effect, demonstrated by analytical hormonal investigations. The inhibition of the synthesis of steroids in the ovary affected not only progesterone but also the estrogens.

JOURNAL-ARTICLE

Postcoital contraception.

Med-Welt. 1978 Oct 6; 29(40): 1576-8

Beckmann-M; Beller-FK

JOURNAL-ARTICLE

Postcoital contraception in primates. II. Examination of STS 153 and STS 287 as interceptives in the baboon (*Papio hamadryas*).

Zentralbl-Gynakol. 1978; 100(22): 1454-8

Komor-A; Hobe-G; Strecke-J; Ponsold-K; Grosse-P; Goncharov-NP; Schubert-K

The interceptive activity of 2 new synthesized steroid compounds: STS 153 (17 beta-Phenylaminocarbonyloxy-estra-1,3,5(10)-triene-3-methyl ether and STS 287 (16 alpha-Bromo-17 beta-[N',N'-dimethylhydrazino]-carbonyloxy-estra-1,3,5(10)-triene-3-methyl ether) and of 17 alpha-Ethynylestradiol was investigated in baboons.--Postcoital oral administration of 1--3 mg/kg b. w. STS 153 for 5--7 days and of 1 mg/kg b. w. STS 287 for 5 days resulted in a fertility inhibition of about 90% and 95% respectively. A dose of 2 mg/kg b. w. of ethynylestradiol was necessary to attain complete fertility inhibition. Following administration of STS 153 and STS 287, side effects were not observed. Pharmacokinetic aspects are discussed.

JOURNAL-ARTICLE

Postcoital contraception.**Int-J-Gynaecol-Obstet. 1978-79; 16(6): 497-501**

Yuzpe-AA

The evolution of postcoital contraception has led to the development of emergency measures to be used following a single unprotected act of intercourse and to ongoing methods, such as the administration of a contraceptive steroid agent following every coital exposure. In emergency situations, the most commonly employed hormonal steroids are the synthetic, conjugated and natural estrogens, administered in large doses for five days. Recently, a combination of an estrogen and a progestin has been employed for the same purpose. A copper-bearing intrauterine device (IUD), inserted within seven days of coitus, has also been utilized with success. Progestins alone have been utilized as an ongoing method of postcoital contraception. Failure rates have been found to vary with the dosage, the specific progestin employed and the frequency of intercourse. The major role of postcoital contraception in the developed world appears to be as an emergency measure. Ease of availability, a high degree of efficacy and a low incidence of side effects are essential for patient and physician acceptance.

REVIEW

Carbohydrate metabolism in women receiving d-norgestrel for postcoital contraception.

Horm-Metab-Res. 1979 Jan; 11(1): 81-2

Garmendia-F; Urdanivia-E; Kesseru-E

JOURNAL-ARTICLE

An alternative to the use of high-dose estrogens for postcoital contraception.

J-Am-Coll-Health-Assoc. 1979 APR; 27(5): 247-9

Schilling-LH

JOURNAL-ARTICLE

Mode of action of DL-norgestrel and ethinylestradiol combination in postcoital contraception.**Fertil-Steril. 1979 Sep; 32(3): 297-302**

Ling-WY; Robichaud-A; Zayid-I; Wrixon-W; MacLeod-SC

Possible mechanisms of action of a combination of ethinylestradiol (EE) and dl-norgestrel as a postcoital contraceptive agent were studied in 12 healthy female volunteers. An oral dose of 0.1 mg of EE and 1.0 mg of dl-norgestrel was given at the predicted time of ovulation and again 12 hours later. Serum luteinizing hormone, prolactin, progesterone, 17 alpha-hydroxyprogesterone, and estradiol were measured by specific radioimmunoassays in blood samples obtained daily from the 8th day of the menstrual cycle to the 1st day of menses. Hormone profiles suggested that the medication elicited a range of individual variations in pituitary and/or ovarian responses. Histologic examination of the endometrium consistently showed significant alteration in endometrial development with a dissociation in maturation of glandular and stromal components. This postcoital contraceptive acts either by (1) suppressing ovulation or (2) disrupting luteal function by acting directly on the corpus luteum or by interfering with appropriate endometrial responses to ovarian steroids.

JOURNAL-ARTICLE

Postcoital contraception.

Akush-Ginekol-Sofia. 1980; 19(1): 71-6

Vasilev-D

JOURNAL-ARTICLE; REVIEW

Postcoital contraception with an injectable estrogen preparation (Org 369 - 2).**Contraception. 1980 Aug; 22(2): 165-74**

Schindler-AE; Ladanyi-S; Goser-R; Keller-E

In one-hundred women age 15 to 45, postcoital contraception was attempted with a "morning-after" injection consisting of 12.5 mg estradiol-benzoate and 10 mg of estradiol-phenylpropionate. Plasma estradiol-17 β , progesterone, LH, FSH and Prl were measured by specific radioimmunoassays and BBT was recorded. In 97.8% the injection was given within 48 hours after unprotected coitus. The medication induced minimal cycle and bleeding pattern changes. The rate of side effects was low. The incidence of pregnancies due to medication failure was 3%. The plasma hormone patterns before and under therapy are demonstrated and drug-induced changes discussed.

JOURNAL-ARTICLE

Ethinyl estradiol and conjugated estrogens as postcoital contraceptives.**JAMA. 1980 Sep 19; 244(12): 1336-9**

Dixon-GW; Schlesselman-JJ; Ory-HW; Blye-RP

Five study centers enrolled 1,311 women seeking postcoital contraception methods. Ethinyl estradiol was administered at 5 mg/day and conjugated estrogens at 30 mg/day for five consecutive days starting within 72 hours of unprotected coitus. Eleven pregnancies occurred in the 976 women who had a single unprotected coitus at midcycle. Based on published information, 69 pregnancies would have been expected if no contraceptives were used. Although both treatments were effective in preventing pregnancy, ethinyl estradiol seemed to be more effective. At the two centers alternately prescribing both drugs, none of 137 women treated with ethinyl estradiol became pregnant, while six of the 132 given conjugated estrogens became pregnant. Women whose treatment commenced on the first postcoital day seemed to have lower pregnancy rates than those whose medication was delayed to the second or third postcoital day regardless of which drug was used. Side effects were mainly limited to nausea that occurred in 70% and vomiting that was experienced by 33% of all women treated.

JOURNAL-ARTICLE

Postcoital contraception.

Med-J-Aust. 1981 Jan 24; 1(2): 68, 85-7

Porter-J; Jones-W

JOURNAL-ARTICLE

Postcoital contraception.

Ned-Tijdschr-Geneskd. 1981 Jul 11; 125(28): 1126-9

Hamerlynck-JV

JOURNAL-ARTICLE

Postcoital contraception with 0.75 mg d-norgestrel (Postinor).

Ther-Hung. 1981; 29(1): 31-4

Seregely-G; Vero-T

JOURNAL-ARTICLE

Luteolytic effect of azastene in the nonhuman primate.**Obstet-Gynecol. 1982 Mar; 59(3): 303-8**

Asch-RH; Smith-CG; Siler-Khodr-TM; Bartke-A

The ability to block steroidogenesis with 4, 4, 17 - alpha - trimethylandrosterone - 5 - eno [2, 3, -d] isoxazol - 17-ol (azastene) was studied in 3 different models. Oral administration of 500 mg to rhesus monkeys on different days of their luteal phase induced marked depression of circulating progesterone concentrations, and in some cases early onset of menses. Simultaneous administration of human chorionic gonadotropin (hCG) during the midluteal phase did not overcome the luteolytic effect of azastene. Concentrations of 50 micrograms/ml of azastene inhibited testosterone secretion by decapsulated mice testes in vitro in response to hCG [controls, 1165 +/- 196 ng/ml, azastene, 306 +/- 40 ng/ml (P less than .01)]. Production of progesterone by dispersed luteal cells from rhesus monkey corpora lutea was markedly inhibited by the presence of 25 and 50 micrograms/ml azastene in the incubation media (P less than .05 and less than .01, respectively). The availability of a compound that blocks in vivo and in vitro gonadal steroidogenesis opens a new approach to postcoital contraception in primates because of its luteolytic and interceptive activity. The possible mechanisms of action of azastene are discussed.

JOURNAL-ARTICLE

Postcoital contraception (or morning-after contraception).

Soins-Gynecol-Obstet-Pueric-Pediatr. 1982 Jul-Aug(14-15): 17

Guillat-JC

JOURNAL-ARTICLE

Side effects of danazol compared with an ethinyloestradiol/norgestrel combination when used for postcoital contraception.

Contraception. 1983 Jan; 27(1): 39-49

Rowlands-S; Guillebaud-J; Bounds-W; Booth-M

A postcoital contraceptive with a lower incidence of nausea and vomiting than oestrogen-progestogen combinations would be a significant advance. During a nine-month period, 101 women were treated at the Margaret Pyke Centre in London with either an oestrogen-progestogen combination or with danazol. A comparison of the side effects of each drug is reported. Those treated with danazol were six times less likely to experience nausea and none vomited. With the exception of breast symptoms, other side effects were five times less common in women receiving danazol. These differences give danazol a clear advantage in terms of patient acceptability. Further experience will enable the efficacy of danazol to be evaluated and so determine whether this drug should become the preferred hormonal postcoital treatment.

RANDOMIZED-CONTROLLED-TRIAL

**Mode of action of dl-norgestrel and ethinylestradiol combination in postcoital contraception.
II. Effect of postovulatory administration on ovarian function and endometrium.**

Fertil-Steril. 1983 Mar; 39(3): 292-7

Ling-WY; Wrixon-W; Zayid-I; Acorn-T; Popat-R; Wilson-E

A combination of 1.0 mg dl-norgestrel and 0.1 mg ethinylestradiol (EE) was administered orally at 36 hours after the detection of the luteinizing hormone peak and again at 48 hours in 12 healthy volunteers with normal menstrual cycles. The effects on ovarian function were studied by comparing the daily serum levels of progesterone (P), 17 alpha-hydroxyprogesterone, and estradiol (E2) in control (placebo) and treatment cycles. Five subjects showed no significant change in the levels of these steroids but had a shortened luteal phase. The treatment significantly decreased both P and E2 levels in three subjects, while two subjects showed diminished E2 levels only. The remaining two subjects had lower P levels and fluctuating E2 patterns. Endometrial biopsies from both study cycles indicated asynchronous development of the epithelial and stromal components in the treatment cycle. These findings (abnormal luteal phase steroid levels and duration and outphased endometrial development) indicate that corpus luteum function was variously affected by the action of norgestrel-EE treatment.

JOURNAL-ARTICLE

Our experience with the clinical trial of postinor--an oral hormonal preparation for postcoital contraception.

Akush-Ginekol-Sofiia. 1983; 22(3): 239-42

Vasilev-D; Katsarova-M

CLINICAL-TRIAL; JOURNAL-ARTICLE

Postcoital contraception.

Lancet. 1983 Apr 16; 1(8329): 855-6

EDITORIAL

Behavioural patterns in women requesting postcoital contraception.

J-Biosoc-Sci. 1983 Apr; 15(2): 145-52

Rowlands-S; Booth-M; Guillebaud-J

JOURNAL-ARTICLE

Postcoital contraception.

Lancet. 1983 May 14; 1(8333): 1107

McGuinness-MN

LETTER

Postcoital contraception.

Ugeskr-Laeger. 1983 Jun 13; 145(24): 1879-81

Vejtorp-M

JOURNAL-ARTICLE

Postcoital contraception or abortion?

Lancet. 1983 Jul 23; 2(8343): 223

LETTER

Again on postcoital contraception.

Cesk-Gynekol. 1983 Aug; 48(7): 498-9

Havranek-F

JOURNAL-ARTICLE

Interception (postcoital contraception).

Harefuah. 1983 Oct 2; 105(7): 176-7

Schenker-JG; Burstein-P

JOURNAL-ARTICLE

Postcoital contraception.

Akush-Ginekol-Mosk. 1983 Nov(11): 31-3

Farkas-M

JOURNAL-ARTICLE

About postcoital contraception.

Midwife-Health-Visit-Community-Nurse. 1983 Nov; 19(11): 434

Trimmer-E

JOURNAL-ARTICLE

Case of ectopic pregnancy after postcoital contraception with ethinyloestradiol - levonorgestrel.

Br-Med-J-Clin-Res-Ed. 1983 Nov 5; 287(6402): 1343-4

Kubba-AA; Guillebaud-J

JOURNAL-ARTICLE

Mode of action of dl-norgestrel and ethinylestradiol combination in postcoital contraception. III. Effect of preovulatory administration following the luteinizing hormone surge on ovarian steroidogenesis.

Fertil-Steril. 1983 Nov; 40(5): 631-6

Ling-WY; Wrixon-W; Acorn-T; Wilson-E; Collins-J

A combination of 1.0 mg dl-norgestrel and 0.1 mg ethinylestradiol was administered orally at 18 hours after the detection of luteinizing hormone rise and again at 30 hours in five healthy volunteers with normal menstrual cycles. The effects on ovarian function were studied by comparing the daily serum levels of progesterone (P), 17 alpha-hydroxyprogesterone, and estradiol (E2) measured in a control (placebo) cycle with those in two consecutive treatment cycles. Treatment did not alter the steroid levels in one subject. P was suppressed in one or both treatment cycles of four subjects. E2 was suppressed in both treatment cycles of one subject and produced widely fluctuating patterns in another. The hormonal patterns in the two consecutive treatment cycles of the same individual were similar in all but one instance, where only the P level in the second treatment cycle was diminished. These results showed that this treatment can elicit steroidogenic responses of varying degrees and duration. The contraceptive action may lie in the altered P and/or E2 level at certain points in the menstrual cycle.

JOURNAL-ARTICLE

Postcoital contraception.

Schweiz-Rundsch-Med-Prax. 1984 Feb 28; 73(9): 283-6

Wyss-R; Bourrit-C

JOURNAL-ARTICLE

Awareness of the existence of postcoital contraception among students who have had a therapeutic abortion.

J-Am-Coll-Health. 1984 Jun; 32(6): 244-6

Schilling-LH

JOURNAL-ARTICLE

Biological, microscopic and scanning electron microscopic investigations of the effects of postinor /d-norgestrel/ in rabbits.

Contraception. 1984 Aug; 30(2): 153-9

Ugocsai-G; Resch-B; Traub-A; Sas-M

The contraceptive effect of d-norgestrel given immediately after copulation in various quantities was investigated in rabbits. It was established that the effect is dose-dependent. A correlation was found between the amount of dose administered and the changes taking place on the surface of endometrium. It can be suggested that d-norgestrel alters the surface of the endometrium to such an extent that nidation is unable to take place; therefore, it can be used for postcoital contraception at any time.

JOURNAL-ARTICLE

Postcoital contraception (without prostaglandins).

Gynakologe. 1984 Sep; 17(3): 200-3

Wyss-R

JOURNAL-ARTICLE

Postcoital contraception.**Clin-Obstet-Gynaecol. 1984 Dec; 11(3): 787-97**

Yuzpe-AA

Changes in sexual mores have led to the need for an effective emergency postcoital contraceptive agent. To meet this need various individual steroids, either alone or in combination, have been evaluated and shown to be effective in preventing pregnancy as a result of a single, unprotected coital act. No drug has received specific marketing approval in North America for this purpose. However, in western Europe, the combination of ethinyloestradiol and levonorgestrel is marketed specifically for use as a postcoital contraceptive agent. Intrauterine copper contraceptive devices have also been shown to be effective postcoital contraceptive agents, but their applicability is confined to a specific segment of the population. Other agents are also being investigated for their postcoital contraceptive effectiveness, including prostaglandins, anti-progestins, GnRH agonists, super agonists and antagonists, and HCG antagonists. Sufficient interest exists in postcoital contraception that the World Health Organization has undertaken, through their task force dealing with postcoital, once-a-month and menses-inducing agents, to develop other postcoital drugs.

JOURNAL-ARTICLE

Postcoital contraception with steroid hormones.**Zentralbl-Gynakol. 1984; 106(17): 1173-81**

Kohler-G; Goretzlehner-G

Large doses of estrogens employed for postcoital contraception have definitely been shown to be effective, but estrogens used in such high doses would result in a high incidence of side-effects. Therefore this method should be reserved for the occasional emergency. Postcoital estrogen-progestogen-combination is suitable for women exposed to an isolated act of intercourse in midcycle. The advantage of this method is the possibility of a delayed administration after intercourse. Progestogens alone can be used after each coital exposure. One of the most frequent problems is the alteration of the menstrual pattern. Continued use can be recommended for women with occasional intercourse in cycle. Possible mechanisms of action of steroidal postcoital contraceptives are discussed involving problems of this contraceptive method.

JOURNAL-ARTICLE

Experiences with levonorgestrel in postcoital contraception.**Zentralbl-Gynakol. 1984; 106(17): 1182-91**

Canzler-E; Ahrendt-HJ; Ahrendt-S

To examine levonorgestrel as a postcoital contraceptive, 77 women received an oral dose of 0.4 mg per coitus for 1011 cycles and 27 women were administered 0.75 mg per coitus for 226 cycles. In the first dose group seven women became pregnant (Pearl's index 8.3), while two pregnancies resulted in the second group, one of the latter because of faulty drug intake (uncorrected Pearl's index 10.6; corrected Pearl's index 5.3). Menstrual irregularities (chiefly break-through bleedings and oligomenorrhea) were observed in 84.4% and 88.9% of the women, respectively. The number of cycle disorders increased with increasing intake rate and diminished when the drug was applied in excess of six months. The experiments undertaken to test the mechanisms of action indicated an influence on both cervical factor and endometrium, whereas the occurrence of LH-peaks and biphasic basal body temperature patterns suggested the presence of ovulations. Application of levonorgestrel for postcoital contraception failed to be a reliable routine method of hormonal contraception because of insufficient efficacy and considerable menstrual irregularities. The drug should be administered only after unprotected sexual intercourse as might happen, to women with very low frequency of intercourse, or in periods of reduced fertility.

JOURNAL-ARTICLE

Postcoital contraception.

Med-Pregl. 1985; 38(3-4): 205-6

Draca-P; Jokin-S; Murcmul-S

JOURNAL-ARTICLE

Potential use of postcoital contraception to prevent unwanted pregnancy.

Br-Med-J-Clin-Res-Ed. 1985 Apr 6; 290(6474): 1040-1

Johnston-TA; Howie-PW

JOURNAL-ARTICLE

Post-coital contraception using a combination of d-norgestrel and ethinyloestradiol.**J-Gynecol-Obstet-Biol-Reprod-Paris. 1985; 14(4): 523-6**

Chi-Nguyen-Duy; Zufferey-MM; Welti-H

This study was conducted to assess the efficacy of d-Norgestrel associated with Ethinylestradiol (Neogynon 21) as postcoital contraception and to report on the clinical experience obtained with this type of contraception. 323 women were treated during 72 h. period following unprotected intercourse. All subjects received 0,2 mg Ethinylestradiol and 1 mg d-Norgestrel (Levonorgestrel) in 2 equally divided doses 12 hours apart. - 1 mg Levonorgestrel was observed to be as effective as 2 mg of the racemic Norgestrel. PCC given during the first part of the cycle, shortened the latter in 80% of relevant cases. Nausea occurred in 30.3% of all patients; among these 14.2% also mentioned vomiting. Three pregnancies occurred of which only one could be attributed to method failure. The corrected failure rate is thus estimated at 0.3%.

JOURNAL-ARTICLE

Postcoital contraception.

Srp-Arh-Celok-Lek. 1985 May-Jun; 113(5-6): 485-92

Sekulovic-D; Primorac-M

JOURNAL-ARTICLE

Postcoital contraception.

Pediatr-Nurs. 1985 Sep-Oct; 11(5): 384

Fischer-RG

JOURNAL-ARTICLE

Postcoital contraception with PC4.

Drug-Ther-Bull. 1985 Dec 16; 23(25): 97-8

JOURNAL-ARTICLE

Postcoital contraception.**Cesk-Gynekol. 1986 Mar; 51(2): 103-5**

Kliment-V; Ziak-F; Stanislav-D; Hronec-M

JOURNAL-ARTICLE

The biochemistry of human endometrium after two regimens of postcoital contraception: a dl-norgestrel/ethinylestradiol combination or danazol.

Fertil-Steril. 1986 Apr; 45(4): 512-6

Kubba-AA; White-JO; Guillebaud-J; Elder-MG

A combination of 0.5 mg levonorgestrel (in 1 mg dl-norgestrel) and 0.1 mg ethinylestradiol was administered to eight volunteers 48 hours after the start of the luteinizing hormone surge. A second dose was given 12 hours later. Endometrial samples were obtained 24 hours after the first dose was given. The steroid receptor concentration was compared with ovulatory spontaneous cycles. The dl-norgestrel/ethinylestradiol combination caused a significant reduction in receptor concentration. Isocitrate dehydrogenase (a progestin-sensitive enzyme) was also altered, suggesting an effect on endometrial metabolism. Danazol was used in a similar fashion, with two doses each of 400 mg. Nine volunteers were studied. A similar pattern of alteration of endometrial biochemistry was demonstrated but did not reach statistical significance. The relevance to the postcoital use of hormones is discussed.

JOURNAL-ARTICLE

Risks of postcoital contraception using a d-norgestrel-ethinyl estradiol combination.

Ther-Umsch. 1986 May; 43(5): 438-40

Welti-H; Nguyen-Duy-N; Zufferey-MM

JOURNAL-ARTICLE

A possible mechanism of action of danazol and an ethinylestradiol/norgestrel combination used as postcoital contraceptive agents.

Contraception. 1986 Jun; 33(6): 539-45

Rowlands-S; Kubba-AA; Guillebaud-J; Bounds-W

Twenty-seven women requesting postcoital contraception were randomly allocated to take an ethinylestradiol/dl-norgestrel combination or danazol. Urine specimens were assayed for luteinising hormone (LH) and pregnanediol-3-glucuronide (P3G) levels from the day of the postcoital treatment to the next period. In addition, the urine samples of these recruits and 12 additional women were assayed for the Beta-subunit of human chorionic gonadotropin (B-hCG). A consistent pattern of alteration in urinary steroids was lacking, indicating a heterogeneous effect on ovarian function. There was no evidence of early pregnancy in successfully treated cases. We suggest that the main mechanism of action of these drugs is at the endometrial level.

RANDOMIZED-CONTROLLED-TRIAL

The postcoital IUD as an effective continuing contraceptive method.**Contraception. 1986 Dec; 34(6): 549-58**

Gottardi-G; Spreafico-A; de-Orchi-L

A two-year controlled clinical study of the effectiveness of postcoital IUD as a continuing contraceptive method in 98 women requesting a postcoital contraception is presented. The control group was selected from women requesting an IUD as contraceptive choice. The rates of accidental pregnancy, expulsion and removal for medical reasons did not differ between the two groups. Removal for personal reasons was the only termination event that showed a significant difference at one year. Moreover, the removal for personal reasons of interceptive IUD users mainly occurred in the early months after insertion. Postcoital IUD has proved to be an effective continuing contraceptive method. Special attention and sympathetic counseling should be given to postcoital IUD users before insertion and during the three months following insertion.

CLINICAL-TRIAL

Postcoital contraception with dl-norgestrel/ethinyl estradiol combination: six years experience in a student medical clinic.

Contraception. 1987 Sep; 36(3): 287-93

Percival-Smith-RK; Abercrombie-B

Postcoital contraception with ethinyl estradiol/dl-norgestrel in combination has been available to women students attending the University of British Columbia since 1974. This paper reports on the side effects, cycle control and efficacy, for a six-year period (1979-1985). In this sample of women 50% reported side effects of nausea alone or nausea with vomiting. Length of the menstrual cycle was shortened in women who took the medication prior to the expected day of ovulation. The number of pregnancies reported was significantly (p less than 0.002) less than the number expected had the medication not been taken. Some women took the medication even though there was a possibility of conception earlier in the cycle and this might account for four of the failures. The mode of action of the postcoital medication remains unsolved making it difficult to understand possible reasons for the other 14 failures.

JOURNAL-ARTICLE

Postcoital contraception with levonorgestrel during the peri-ovulatory phase of the menstrual cycle. Task Force on Post-ovulatory Methods for Fertility Regulation.

Contraception. 1987 Sep; 36(3): 275-86

Bhattacharjee-SK; Romeo-J; Kononova-ES; Pretnar-Darovec-A; Saraya-L; Shi-YE; Prasad-RN; Bartfai-G; Boukhris-R; Van-Look-PF; et-al

The contraceptive efficacy and side effects of postcoital levonorgestrel used repeatedly during the peri-ovulatory period of one cycle was examined in 259 women. All subjects were of proven fertility in their present union and had ovulatory cycles as assessed from pre-treatment BBT charts. The mean number of coital acts during the treatment cycle was 7.5 (SD:2.6) and the mean number of 0.75 mg levonorgestrel tablets taken during the peri-ovulatory period was 4.0 (SD:1.2). Two pregnancies, both considered to be method failures, occurred, giving a failure rate of 0.8% per treated cycle. Although the overall effect of levonorgestrel on menstrual cycle length was small and insignificant, menstrual cycle disturbances were not uncommon. Intermenstrual bleeding or spotting occurred in 8.5% of the treated cycles and 12.5% of the cycles were less than 20 or more than 35 days. Other side effects, mainly nausea, headache and dizziness, were reported by about 20% of the subjects but the apparent incidence of these complaints varied markedly between the nine participating centres from 0% to just over 50%. The data suggest that repeated postcoital use of levonorgestrel is probably not a viable approach to fertility regulation for the majority of women who have regular intercourse and wish to limit the number of their pregnancies.

JOURNAL-ARTICLE

Postcoital contraception with dienogest.**Zentralbl-Gynakol. 1987; 109(21): 1296-302**

Kohler-G; Canzler-E; Lembke-S; Amon-I; Ahrendt-HJ

Fifty eight fertile female volunteers between 20 to 45 years were enrolled in a clinical trial to evaluate the efficacy and tolerance of the progestin dienogest (17 alpha-cyanomethyl-17 beta-hydroxyestra-4,9-dien-3-one, VEB Jenapharm Jena GDR) as a postcoital contraceptive. An oral dose of 2 mg dienogest was administered immediately after each coitus. The 58 women reported 872 intercoursures during 302 cycles. Frequency of ingestion was on average 3 times per cycle. Pregnancy occurred in 14 women corresponding to a Pearl-index of 55.6. The observed pregnancy rate referring to all intercoursures was 1.6 per cent. The incidence of expected pregnancies in relation to the coital exposures was 4.04 per cent. As a result the risk of pregnancy was reduced 2.5 times by dienogest. Menstrual disorders occurred in 18.9 per cent in regard of the total numbers of cycles. The results and an overview of literature suggest that neither dienogest nor other progestins are suitable as a sole contraceptive method when used as a postcoital agent. They are only indicated as a risk-reducing method after so-called "contraceptive emergencies".

CLINICAL-TRIAL

Postcoital contraception.

Duodecim. 1987; 103(9): 566-71

Toivonen-J

REVIEW,-TUTORIAL

Postcoital contraception using a desogestrel-ethinyl estradiol combination.

Minerva-Ginecol. 1988 Feb; 40(2): 109-11

Alovisi-C; Pacilli-L

JOURNAL-ARTICLE

Postcoital contraception: some characteristics of women who use this method.**Contraception. 1988 Apr; 37(4): 425-9**

Percival-Smith-RK; Abercrombie-B

This paper describes some of the characteristics of the women who attended a medical clinic requesting postcoital contraception. The information is derived from 871 observations in 653 women who requested this contraception. The mean age of women at the time of first request for this method was older than expected (21.9 years) and the mean time from first coitus to first request for the method was longer than expected (2.7 years). Previous pregnancy with therapeutic abortion was reported by 11.3% of the women. Multiple users of the method were younger at their first visit, and more likely to report a previous pregnancy. The method of contraception used before and after the need for postcoital contraception tended to be the same. Barrier method users have need of this method either for use when they fail to use their barrier method or for use when their barrier method fails. The need for more general availability of this method is discussed.

JOURNAL-ARTICLE

Ethinyl oestradiol and D-norgestrel is an effective emergency postcoital contraceptive: a report of its use in 1,200 patients in a family planning clinic.

Aust-N-Z-J-Obstet-Gynaecol. 1988 May; 28(2): 137-40

Bagshaw-SN; Edwards-D; Tucker-AK

We describe a prospective study of 1,200 patients using the Yuzpe regimen of hormonal postcoital contraception. There was an 85% follow-up rate, and of the 1,015 patients followed there were 13 pregnancies, giving a pregnancy rate of 1.3%. The number of expected pregnancies at mid-cycle was reduced by 83%; 12 of the 13 pregnancies went on to abortion. The patients were young: 86% were under 25, and 10% were under 15. The most frequent reason for presentation was that no contraception had been used (57%). All patients received an antiemetic; 57% experienced no side-effects, 28% had some nausea and 9.6% some vomiting. It is concluded that this is a safe form of emergency contraception, which is an effective way of reducing the number of unwanted pregnancies, especially in the very young.

JOURNAL-ARTICLE

Danazol: an alternative in postcoital contraception.

Minerva-Ginecol. 1989 Jan; 41(1): 33-4

Pejrani-G; Tessari-S

Personal experience with postcoital contraception through the use of Danazol is reported.

JOURNAL-ARTICLE

Postcoital contraception: a family planning study.**N-Z-Med-J. 1989 Apr 12; 102(865): 151-3**

Kane-LA; Sparrow-MJ

The New Zealand Family Planning Association undertook a prospective study of Yuzpe's postcoital method of contraception (0.1 mg ethinyloestradiol and 1 mg d1-norgestrel taken within 72 hours of unprotected intercourse and repeated 12 hours later). The study also used pills containing levonorgestrel. Both pill formulations were equally effective. All participants were drawn from six family planning branches throughout the country. The study covered a period of one year. There were 909 participants with 8% lost to follow up. Strict criteria excluded women on medication or hormone therapy. The ages ranged from 11 to 43 years with 92% aged 19 years and under. Results revealed an overall failure rate of 2.3% and a significantly higher failure rate (4.49%) if the method was taken after 48 hours of unprotected intercourse and a significantly lower failure rate (1.22%) if taken before 12 hours of unprotected intercourse. Vomiting occurred in 17% but it did not affect the failure rate.

CLINICAL - TRIAL

Initial experiences with a levonorgestrel-ethinyl estradiol combination for interception.**Geburtshilfe-Frauenheilkd. 1989 Dec; 49(12): 1087-9**

Fitz-R; Grunberger-W; Vytiska-Binstorfer-E

Several authors have reported on reliable postcoital contraception, using an estrogen/gestagen combination. These studies in more than a hundred women showed, that the unprotected intercourse in less than 50% took place around ovulation. Pregnancy rates from 0.7 to 2.6% were observed. From October 1987 to July 88, 50 women after unprotected intercourse around ovulation were included in our study. From one to 44 hours after intercourse, 0.5 mg levonorgestrel + 0.1 mg ethinylestradiol (Tetragynon) were administered orally. The same dose was repeated 12 hours later. Cervical secretion, LH- and E2 and P-serum levels at the time of the first administration were determined and side effects and bleeding patterns were registered. In one third of the women, we observed slight side effects. The bleeding resulted 5 to 29 days after the first tablet administration. Shortened menstruation cycles were seen more often than prolonged cycles. Bleeding duration was only slightly prolonged. Two pregnancies occurred - both women vomited immediately after the first medication and disregarded the order to visit our department again as quickly as possible. Tetragynon is not appropriate for regular contraception and should only be used in emergency situations.

JOURNAL-ARTICLE

Comparative cross-over pharmacokinetic study on two types of postcoital contraceptive tablets containing levonorgestrel.

Contraception. 1990 May; 41(5): 557-67

He-CH ; Shi-YE ; Liao-DL ; Zhu-YH ; Xu-JQ ; Matlin-SA ; Vince-PM ; Fotherby-K ; Van-Look-PF

A pharmaceutical and pharmacokinetic study was carried out on levonorgestrel tablets from two different sources (Hungarian- and Chinese-made). Both preparations contained 0.75 mg levonorgestrel and had been shown to have similar contraceptive efficacy and side effects when used for postcoital contraception. Absorption and bioavailability of the Hungarian-made tablets were greater as evidenced by higher serum concentrations of levonorgestrel, a greater area under the concentration-time curve during the first 24 hours, and a more marked suppressive effect on SHBG levels. These differences most probably reflect differences in their pharmaceutical formulation, in particular the extent of tablet dissolution and the degree of micronisation of levonorgestrel.

RANDOMIZED-CONTROLLED-TRIAL

Knowledge and use of postcoital contraception: a survey among health professionals in Tower Hamlets.

Br-J-Gen-Pract. 1990 Aug; 40(337): 326-30

Burton-R; Savage-W

Comment in: Br J Gen Pract 1992 Sep;42(362):394. Comment in: Br J Gen Pract 1992 Sep;42(362):394-5

The knowledge and estimated retrospective use of postcoital contraception was ascertained from health professionals in Tower Hamlets in the summer of 1988 using a postal questionnaire. Eighty five per cent of general practitioners responded and 91% of these had received requests for postcoital contraception within the previous six months. Only one third of general practitioners had information about postcoital contraception available in their surgeries. Family planning doctors and nurses had the most accurate knowledge of the method but many health professionals appeared to lack sufficient knowledge to ensure appropriate prescribing and to publicize this method to their women patients. It is concluded that if the high rate of abortion in the borough is to be reduced, health professionals as well as women need to be further educated as part of a postcoital contraception publicity campaign. Use of the term 'emergency contraception' rather than the non-medical term 'the morning after pill' may be more effective and reduce the present confusion among both groups.

JOURNAL-ARTICLE

Hormonal postcoital contraception with an ethinylestradiol-norgestrel combination and two danazol regimens.**Eur-J-Obstet-Gynecol-Reprod-Biol. 1990 Dec; 37(3): 253-60**

Zuliani-G; Colombo-UF; Molla-R

The ethinylestradiol-norgestrel combination (EE-NG) for postcoital contraception, as described by Yuzpe, has been shown to be an effective method but with frequent side effects. To overcome the problem of adverse effects a new approach using danazol was proposed, but the efficacy and acceptability of this treatment have not yet been tested in large studies. In a 5-year period at the AIECS Family Planning Centre in Milan we treated 2448 women requesting postcoital contraception using Yuzpe's regimen and two danazol regimens (800 mg/1200 mg). The patients' acceptability for danazol treatment was higher than for Yuzpe's regimen due to fewer, milder and shorter side effects. Nine pregnancies occurred in the EE-NG group (2.21%), 17 in the 800 mg group (1.71%) and 6 in the 1200 mg group (0.82%). Our study shows a statistically significant efficacy against expected pregnancy rates both with Yuzpe's regimen and with danazol. The 1200 mg danazol treatment seems to be more effective and can be considered a valid alternative to the EE-NG combination for hormonal postcoital contraception.

JOURNAL-ARTICLE

Emergency contraception

BMJ. 1991 Apr 6; 302 (6780): 801

Reader-FC

Comment in: BMJ 1991 May 11;302(6785):1150; comment in: BMJ 1991 May 25;302(6787):1272-3

EDITORIAL

Emergency contraception
BMJ. 1991 May 25; 302(6787): 1272-3

Comment on: BMJ 1991 Apr 6;302(6780):801

COMMENT; LETTER

Alternative treatments in oral postcoital contraception: interim results.**Adv-Contracept. 1991 Jun-Sep; 7(2-3): 271-9**

Webb-AM

The study compares the effectiveness and acceptability of three regimes of postcoital contraception: 1) ethinylestradiol 100 micrograms/levonorgestrel 500 micrograms repeated after 12 hours (Yuzpe method); 2) danazol 600 mg repeated after 12 hours; and 3) RU486 600 mg single dose. Between 1 April 1990 and 15 October 1990, 215 women were selected and randomly allocated to the three treatment groups. One hundred and sixty eight were fully followed up, 35 ongoing and 8 lost to follow-up. All women had regular cycles and were aged 16-45 years. All treatments were given within 72 hours of unprotected intercourse and follow-up was until normal menstruation or diagnosis of pregnancy. beta-HCG was measured quantitatively where there was a suspicion of pregnancy. The data obtained show similar failure rates (Yuzpe 1/57, danazol 2/57, RU486 1/54) but more side-effects in the Yuzpe group (nausea 74.1%, vomiting 22.4%, breast tenderness 22.4%) than in the other two (danazol: nausea 31.6%, vomiting 3.5%, breast tenderness 19.3%) and (RU486: nausea 36.4%, vomiting 3.6%, breast tenderness 23.6%). There was one apparent allergic reaction in the danazol group. RU486 caused greater cycle disturbance, prolonging the cycle considerably. Initial results suggest that danazol and RU486 may be much more acceptable methods of postcoital contraception due to reduced side-effects and, in the latter case, single dose. Although numbers are small at present, the effectiveness of the newer methods appear similar to Yuzpe.

RANDOMIZED-CONTROLLED-TRIAL

Postcoital contraception with mifepristone

Lancet. 1991 Jun 8; 337(8754): 1414-5

Glasier-A; Thong-KJ; Dewar-M; Mackie-M; Baird-DT

LETTER

Postcoital contraception: myth or reality?
Lancet. 1991 Jul 6; 338(8758): 39-41

Silvestre-L; Bouali-Y; Ulmann-A

Comment in: Lancet 1991 Aug 10;338(8763):385; comment in: Lancet 1991 Aug 24;338(8765):508

JOURNAL-ARTICLE; META-ANALYSIS

Postcoital contraception**Lancet. 1991 Aug 10; 338(8763): 385**

Kubba-AA

Comment on: Lancet 1991 Jul 6;338(8758):39-41

COMMENT; LETTER

Postcoital contraception

Lancet. 1991 Aug 24; 338(8765): 508

Haspels-AA

Comment on: Lancet 1991 Jul 6;338(8758):39-41

COMMENT; LETTER

A multicenter clinical study on two types of levonorgestrel tablets administered for postcoital contraception.

Int-J-Gynaecol-Obstet. 1991 Sep; 36(1): 43-8

He-CH; Shi-YE; Xu-JQ; Van-Look-PF

Contraceptive efficacy, cycle control and side effects of two types of 0.75 mg levonorgestrel tablets taken postcoitally during the periovulatory period of one cycle were studied in a multicenter trial involving 361 women. No significant differences were found between the two types of levonorgestrel pills in terms of contraceptive efficacy, cycle control and side effects. The failure rate observed (1.4% per treated cycle) was similar to that reported for other hormonal approaches to emergency postcoital contraception. Intermenstrual bleeding or spotting occurred in 11.5% of the cycles and anovulation as assessed from BBT charts in 14.4% of cycles. One or more side effects were reported by 22.2% of subjects. The relatively frequent occurrence of cycle disturbances and subjective side effects make it unlikely that the repeated postcoital use of levonorgestrel would be an acceptable routine method of contraception for most women.

RANDOMIZED-CONTROLLED-TRIAL

Emergency contraception.

Practitioner. 1991 Nov; 235(1508): 875-7

Burton-R

JOURNAL-ARTICLE

Update on oral contraceptive pills and postcoital contraception.

Curr-Opin-Obstet-Gynecol. 1992 Aug; 4(4): 502-5

Sondheimer-SJ

Modern oral contraceptive pills are safe for the majority of American women. The most important contraindications to oral contraceptive pill use are a history of thrombophlebitis or thromboembolism while on the pill or during pregnancy, smoking over 15 cigarettes daily if over 35 years of age, active liver disease, hypertension, diabetes, a lipid disorder, or breast cancer. A history of gestational diabetes is not an absolute contraindication to oral contraceptive pill use, but women with such a history must be encouraged to exercise and eat properly to reduce the high risk of developing overt diabetes. Couples should be encouraged to use condoms to reduce the risk of sexually transmitted diseases. Most antibiotics do not decrease the effectiveness of the pill. Nonuse of contraception among adolescents and older couples is the most common reason for failure. Postcoital contraceptive pills are available but are not completely effective. The use of modern contraceptives is almost always safer than nonuse.

REVIEW

Mifepristone (RU 486) compared with high-dose estrogen and progestogen for emergency postcoital contraception

N-Engl-J-Med. 1992 Oct 8; 327(15): 1041-4

Glasier-A; Thong-KJ; Dewar-M; Mackie-M; Baird-DT

Comment in: N Engl J Med 1992 Oct 8;327(15):1088-9; comment in: N Engl J Med 1993 Feb 4;328(5):354-5

Mifepristone (RU 486) is a synthetic steroid with potent antiprogesterone and antiglucocorticoid properties that provides an effective medical method of inducing abortion in early pregnancy. Since progesterone is essential for implantation, we tested the use of mifepristone for emergency postcoital contraception. **METHODS.** We studied 800 women and adolescents requesting emergency postcoital contraception who had had unprotected intercourse within the preceding 72 hours. A total of 398 women and adolescents were randomly assigned to treatment with 100 micrograms of ethinyl estradiol and 1 mg of norgestrel, each given twice 12 hours apart (standard therapy), and 402 women and adolescents were randomly assigned to receive 600 mg of mifepristone. **RESULTS.** None of the women and adolescents who received mifepristone became pregnant, as compared with four of those who received standard therapy; the difference in failure rates between the two regimens was not statistically significant. The number of pregnancies in each group was significantly lower than the number expected according to calculations based on the day of the cycle during which intercourse had taken place (P less than 0.001). In many subjects the stage of the cycle as calculated by menstrual history was inconsistent with measurements of plasma progesterone or urinary pregnanediol excretion. The subjects treated with mifepristone reported less nausea (40 percent vs. 60 percent) and vomiting (3 percent vs. 17 percent) on the day of treatment, as well as lower rates of other side effects, than the subjects treated with the standard regimen, but they were more likely to have a delay in the onset of the next menstrual period (42 percent vs. 13 percent). **CONCLUSIONS.** Mifepristone is a highly effective postcoital contraceptive agent that, if used more widely, could help reduce the number of unplanned and unwanted pregnancies.

RANDOMIZED-CONTROLLED-TRIAL

Postcoital contraception, a forgotten and unused resource?

Lakartidningen. 1992 Sep 9; 89(37): 2948-50

Anzen-B; Zetterstrom-J

REVIEW,-TUTORIAL

Postcoital contraception

Br-J-Gen-Pract. 1992 Sep; 42(362): 394

Fluxman-J

Comment on: Br J Gen Pract 1990 Aug;40(337):326-30

COMMENT; LETTER

Comparison of Yuzpe regimen, danazol, and mifepristone (RU486) in oral postcoital contraception.

BMJ. 1992 Oct 17; 305(6859): 927-31

Webb-AM; Russell-J; Elstein-M

To compare the effectiveness and acceptability of three regimens of postcoital contraception. DESIGN--Randomised group comparison of ethinyloestradiol 100 micrograms plus levonorgestrel 500 micrograms repeated after 12 hours (Yuzpe method); danazol 600 mg repeated after 12 hours; and mifepristone 600 mg single dose. SETTING--Community family planning clinic. SUBJECTS--616 consecutive women with regular cycles aged 16 to 45 years. MAIN OUTCOME MEASURES--Number of pregnancies, incidence of side effects, and timing of next period. RESULTS--The raw pregnancy rates (with 95% confidence intervals) for the Yuzpe, danazol, and mifepristone groups were 2.62% (0.86% to 6.00%), 4.66% (2.15% to 8.67%), and 0% (0% to 1.87%) respectively. Overall, these rates differed significantly (chi 2 = 8.988, df = 2; p = 0.011). The differences between the mifepristone and Yuzpe groups and between the mifepristone and danazol groups were also significant. Side effects were more common and more severe in the Yuzpe group (133 women (70%)) than in either the danazol group (58 (30%)) or the mifepristone group (72 (37%)). The Yuzpe regimen tended to induce bleeding early but mifepristone prolonged the cycle. Three women bled more than seven days late in the Yuzpe group compared with 49 in the mifepristone group. CONCLUSIONS--Mifepristone was effective in reducing expected pregnancy rates and the Yuzpe method also had a clinical effect. Danazol had little or no effect. A further multicentre trial is needed.

RANDOMIZED-CONTROLLED-TRIAL

Postcoital contraception

Br-J-Gen-Pract. 1992 Sep; 42(362): 394-5

Comment on: Br J Gen Pract 1990 Aug;40(337):326-30

COMMENT; LETTER

Emergency contraception.

Br-Med-Bull. 1993 Jan; 49(1): 158-70

Van-Look-PF; von-Hertzen-H

The term 'emergency contraception', as employed in this paper, refers to methods that are used as emergency procedures to prevent pregnancy following unprotected intercourse. Alternative, less appropriate, terms are postcoital and 'morning-after' contraception. References to postcoital preparations can be found as far back as 1500 BC in Egyptian papyri, but it was not until fairly recently that contraceptive research has been able to at least partially fulfill that need. The development of hormonal methods of emergency contraception goes back to the 1960s when the first human trials of postcoitally administered high-dose oestrogens were undertaken. Combined oestrogen- progestogen combination therapy (the so-called Yuzpe regimen) was introduced in the early 1970s, while the postcoital insertion of an intrauterine contraceptive device (IUD) for emergency contraception was first reported in 1976. Other compounds that have been tested more recently include levonorgestrel, the antiprogestogen mifepristone, and danazol. Although there is some debate about the magnitude of the protective effect, few people question the important role that emergency contraception can play in preventing unwanted pregnancy and hence maternal mortality and morbidity resulting from unsafe abortion. Given that the most often used methods of emergency contraception, namely the Yuzpe regimen and postcoital insertion of an IUD, rely on technology that has been available for some 30 years, family planning programmes that claim to be concerned with improving women's reproductive health, cannot really be excused if they do not provide emergency contraception as part of their routine services.

REVIEW

Emergency contraception

Br-J-Gen-Pract. 1993 Feb; 43(367): 84

Hughes-CA

LETTER

Clotting factors after emergency contraception.

Adv-Contracept. 1993 Mar; 9(1): 75-82

Webb-A; Taberner-D

Women with a previous history of thromboembolic disease have often been denied oral emergency contraception because of a theoretical concern about increasing their risk of thrombosis. **METHODS:** Eleven healthy volunteers with regular periods were recruited to the study. A thrombophilia screen was done at the first visit and they each had four measurements of Factor VII and antithrombin III taken at mid-cycle for two cycles. In the third cycle, emergency contraception was given mid-cycle and blood samples were taken 1, 3 and 7 days later. A further four samples were taken during the following cycle and, where the cycle had been significantly foreshortened due to the emergency contraception, a fifth cycle was monitored. The treatment given during the third cycle was the standard Yuzpe regimen of emergency contraception, which consists of 100 micrograms of ethinylestradiol and 500 micrograms of levonorgestrel repeated after twelve hours. **RESULTS:** There was a wide inter- and intra-subject variation in clotting factors in the observation months. There was no obvious effect noted in the levels of the factors measured after treatment, either in the first week or in the subsequent month(s) of follow-up. **CONCLUSIONS:** The dosage of ethinylestradiol used in emergency contraception is very shortlived and this study shows no effect on clotting factors. This suggests that ethinylestradiol should not be automatically dismissed in women with previous thromboembolic disease.

JOURNAL-ARTICLE

Hormonal emergency contraception.

Drug-Ther-Bull. 1993 Mar 29; 31(7): 27-8

REVIEW,-TUTORIAL

Recent results regarding indications for the "morning after pill"

Zentralbl-Gynakol. 1993; 115(3): 105-8

Wessel-J; Buscher-U

Results of interrogating 150 women who visited our department because of postcoital contraception are demonstrated. 80% did actually use one method of contraception. The rate of "condom accidents" was 70 per cent. Only 21 per cent did not use any method of contraception. Taking the facts of sexual habits into consideration we can conclude that women who wish to take the "morning after pill" have a more active sexual life. The intention to prevent an unwanted pregnancy through this postcoital method of contraception indicates a more responsible attitude towards sexuality. The popularity of this method may be increased.

JOURNAL-ARTICLE

Endometrial suction in luteal phase as a method of late postcoital contraception.**Contraception. 1993 May; 47(5): 469-74**

Harel-L; Kaplan-B

In a pilot study group of 25 women presenting in our clinic after exposure at ovulation to undesired pregnancy, endometrial suction by means of a Pipelle catheter was performed. Sixteen of the 25 women had proven fertility and 9 had never tried to conceive. The women were aged 18 to 38 years. Pathological dating of endometrial sampling verified that the patients were actually post-ovulation in all cases studied. hCG tests were performed 10 to 14 days after endometrial suction and all were negative. We conclude that endometrial suction in the luteal phase is a possible means of postcoital non-hormonal contraception, and we are currently expanding our study.

JOURNAL-ARTICLE

Emergency contraception: time for de-regulation?

Br-J-Obstet-Gynaecol. 1993 Jul; 100(7): 611-2

Glasier-A

Comment in: Br J Obstet Gynaecol 1994 Apr;101(4):361-2

REVIEW,-TUTORIAL

Six years of clinical experience using postcoital contraception in college women.

J-Am-Coll-Health. 1993 Sep; 42(2): 61-3

Buttermore-S; Nolan-C

Postcoital contraception (PCC), also known as the "morning-after pill," has been used at the University of Rochester Health Service for several years. In 1985, the healthcare providers developed a formal protocol for dispensing PCC to female students presenting with the complaint of unprotected intercourse within the previous 72 hours. Patients are screened for any absolute contraindications to using birth control pills, are asked to sign a consent form, and are told to schedule a follow-up visit to evaluate pregnancy status and contraceptive options. Data from 1985 to 1991 is presented and include total number of times PCC was dispensed, side effects of medication, patient profiles, and predicted and actual pregnancy rates. The authors compare the data from the University of Rochester with data described in the literature and discuss recommendations for practice.

JOURNAL-ARTICLE

Deregulating emergency contraception

BMJ. 1993 Sep 18; 307(6906): 695-6

Drife-JO

Comment in: BMJ 1993 Oct 30;307(6912):1143. Comment in: BMJ 1993 Oct 30;307(6912):1143-4. Comment in: BMJ 1993 Nov 6;307(6913):1214

EDITORIAL

Deregulating emergency contraception. Counseling and education may suffer

BMJ. 1993 Oct 30; 307(6912): 1143

Mascarenhas-L

Comment on: BMJ 1993 Sep 18;307(6906):695-6

COMMENT; LETTER

Deregulating emergency contraception. Service should reflect greater demand after the weekend

BMJ. 1993 Oct 30; 307(6912): 1143

Rowlands-S; Dakin-L; Booth-M

Comment on: BMJ 1993 Sep 18;307(6906):695-6

COMMENT; LETTER

Deregulating emergency contraception. Genitourinary clinics offer out of hours service

BMJ. 1993 Oct 30; 307(6912): 1143-4

Sockanathan-R

Comment on: BMJ 1993 Sep 18;307(6906):695-6

COMMENT; LETTER

Deregulating emergency contraception

BMJ. 1993 Nov 6; 307(6913): 1214

Sharma-JB; Newman-MR; Smith-RJ

Comment on: BMJ 1993 Sep 18;307(6906):695-6

COMMENT; LETTER

Family planning in the teen population.**Curr-Opin-Obstet-Gynecol. 1993 Dec; 5(6): 798-804**

Hillard-PJ

As an increasing percentage of adolescents reach their sexual debut at younger ages, effective contraceptive methods, which will decrease the risks of unintended pregnancies and sexually transmitted diseases (STDs), become even more critical. Contraceptive methods which are less 'compliance-dependent', such as the implantable subdermal levonorgestrel and the injectable depot formulation of medroxyprogesterone acetate, are popular in adolescents but careful counseling before method selection and on-going counseling when side-effects are experienced are necessary and essential. The use of condoms to decrease the risks of STDs will continue to be important for adolescents, and it remains to be seen what impact the long-term methods will have on effective condom use. Adolescents' access to abortions when contraceptive methods fail, or when no method is used, is being challenged with state laws which mandate parental notification or permission. A greater knowledge about the option of emergency contraception could potentially lead to increased use of this method, particularly when the option of medications such as RU486 becomes available. The potential for a reduction in unintended pregnancies in adolescents, and a reduced need for abortions is a welcome prospect.

REVIEW

Deregulating emergency contraception. Family planning nurses have useful skills

BMJ. 1994 Jan 8; 308(6921): 135

Kishen-M

LETTER

Deregulating emergency contraception. The alternative may be unwanted pregnancies

BMJ. 1994 Jan 8; 308(6921): 135

Webb-A

LETTER

Emergency contraception: time for de-regulation?

Br-J-Obstet-Gynaecol. 1994 Apr; 101(4): 361-2

Thomas-PD

Comment on: Br J Obstet Gynaecol 1993 Jul;100(7):611-2

COMMENT; LETTER

The contraceptive practices of women seeking termination of pregnancy in an Auckland clinic.

N-Z-Med-J. 1994 May 25; 107(978): 189-92

Young-LK; Farquhar-CM; McCowan-LM; Roberts-HE; Taylor-J

The aim of the study was to assess the contraceptive knowledge and practices of women attending the abortion service at Epsom day unit, Green Lane Hospital. **METHODS.** Women attending the unit in December 1992 and January 1993 were asked to take part in the study. A questionnaire was administered to consenting women to assess demographic details and previous contraceptive education. If a contraceptive method was used the reason for failure was explored and if no method was used the reason for non use was explored. **RESULTS.** Sixty-one percent of women were using a contraceptive method in the month of conception. The condom was used by 48% and the pill by 42%. Eight percent of women had never used contraception and 30% were not using a method in the month of conception. Forty-three percent had a household income of less than \$22,000 and financial barriers were the reason for non use in 32% of those not using a method. Of women who did not use contraception, only 11% used emergency contraception, whereas 78% of those surveyed said they knew about emergency contraception. Sixty-three percent of women said they had received enough contraceptive education to select and use a method effectively. Pacific Island women were least likely to have received adequate contraceptive education or to have been using a method of contraception. **CONCLUSIONS.** A number of technical problems were identified with condom use. These problems need to be emphasised by sexuality education programmes and contraceptive prescribers. Omitting pills, diarrhoea, vomiting and drug interactions were important causes of pill failure. The seven day rule needs more emphasis when teaching women how to take the pill and when antibiotics are prescribed. Costs were an important barrier to the use of contraception for a significant proportion of women. Section 99 approval should be utilised more readily and the provision of free contraception, especially to low income groups, needs to be urgently explored.

JOURNAL-ARTICLE

Prostaglandins and progesterone receptor antagonists in human fertility regulation.

Aust-N-Z-J-Obstet-Gynaecol. 1994 Jun; 34(3): 357-60

Healy-DL

Anti-progesterone medicines have now been extensively studied for human fertility regulation. The combination of the anti-progesterone Mifepristone with prostaglandin analogues such as Gemeprost and Misoprostol have been used in several European centres for medical abortion. Used before nine weeks gestation, these medicines have similar efficacy to surgical abortion. In addition, administration of progesterone antagonists within five days of unprotected intercourse appear effective in pregnancy prevention. Anti-progesterone medicines are not currently available in Australia. The introduction of progesterone receptor antagonists and modern prostaglandins would save approximately \$10,000,000 per year to the Australian Health Budget. Furthermore, the introduction of progesterone receptor antagonists for emergency contraception would have even greater financial and emotional savings for Australian women. In Australia, when known carcinogens can be purchased over the counter, it is surely time for Australians to consider effective emergency contraception bought over the counter.

REVIEW,-TUTORIAL

Obstetrics and gynecology.**JAMA. 1994 Jun 1; 271(21): 1689-91**

Wentz-AC; Huggins-GR

Emergency contraception could reduce the number of unintended pregnancies by 1.7 million. The best approach to oral contraception is education and not limitation, but it is unlikely that there will be any increase in contraceptive availability in the near future. Routine ultrasonography in low-risk pregnancies does not appear to be cost-effective.

JOURNAL-ARTICLE

An evaluation of a new teenage clinic and its impact on teenage conceptions in Nottingham

from 1986 to 1992.

Contraception. 1994 Jul; 50(1): 77-86

Wilson-S; Daniel-S; Pearson-J; Hopton-C; Madeley-R

A new contraceptive clinic for teenagers was developed in the centre of Nottingham from 1987 to 1992 and provided care for over 1500 young people in its first three years. Twenty-five percent of clients were aged 16 years and 32% aged 15 or younger. Sixty-seven percent were in full-time education and young unemployed people were under-represented. The majority were young women, who came for routine contraception, usually the oral contraceptive or condom. Seventeen percent came for emergency contraception and 8% for abortion counselling and referral. Over the period 1986 to 1992, data on conceptions for teenage women and women aged over 20 years, who were resident in Nottingham Health district, were compared and when corrected for the estimated population showed that there had been no reduction in teenage conception rates; reasons for this are discussed. The value of conception rates as a measure of quality of sexual health care for teenagers is questioned and other more qualitative methods suggested.

JOURNAL-ARTICLE

Emergency contraception alters progesterone-associated endometrial protein in serum and uterine luminal fluid.

Obstet-Gynecol. 1994 Aug; 84(2): 266-71

Young-DC; Wiehle-RD; Joshi-SG; Poindexter-AN-3rd

To evaluate the effect of high-dose oral contraceptives on serum and uterine luminal fluid progesterone-associated endometrial protein in the luteal phase. **METHODS:** Five ovulatory women participated in the study. In a control cycle, serum and uterine lavage samples were collected on luteal day 11. In the next cycle, on luteal day 9, the participants were given two 50-micrograms ethinyl estradiol-norgestrel tablets, repeated 12 hours later. Serum and uterine lavage samples were collected 48 hours (luteal day 11) after the last dose and analyzed by two-dimensional polyacrylamide gel electrophoresis and radioimmunoassays of the serum. **RESULTS:** Progesterone-associated endometrial protein levels were lower in sera from treated compared with control cycles. Analysis of serum levels of this protein by two-dimensional polyacrylamide gel electrophoresis did not reveal bands corresponding to the known size and charge characteristics (27 kd and pI of 4.9) in either control or treatment samples. On the other hand, in uterine lavage samples, a complete suppression of the 27-kd, pI-4.9 species was evident after treatment. **CONCLUSION:** High-dose ethinyl estradiol-norgestrel emergency contraception effectively suppresses progesterone-associated endometrial protein in the midluteal uterus, potentially altering the endometrial environment unfavorably and affecting the survival of the early embryo.

CLINICAL-TRIAL

Emergency contraception: a review.**Obstet-Gynecol. 1994 Aug; 84(2): 266-71**

Haspels-AA

In the Netherlands, many women use a postcoital method of contraception in "emergency" situations. Postcoital contraception started in the 1960's with the administration of large doses of estrogens: 50 mg diethylstilbestrol for 5 days or 5 mg ethinylestradiol for 5 days. In the eighties, a double-blind study compared the original hormonal therapy of 5 mg ethinylestradiol for 5 days with a combination pill containing just 0.1 mg in combination with 1 mg d1-norgestrel, of which two doses are give, the second 12 hours after the first. This method was as effective in preventing pregnancy as the original treatment with high estrogen dosage. Moreover, it resulted in women suffering less nausea and vomiting. One study from Hong Kong indicated that levonorgestrel without ethinylestradiol was as effective as the combination. Postcoital use of an intrauterine device to prevent pregnancy can be used as an alternative to the hormonal method. A recent development is the use of an antiprogestagen pill: 600 mg Mifepristone on day 27 of the cycle; side effects are minimal and the success rate is high. Mifepristone should be registered and made available in all countries for this indication.

REVIEW

Emergency contraception: a review.**Contraception. 1994 Aug; 50(2): 101-8**

Haspels-AA

In the Netherlands, many women use a postcoital method of contraception in "emergency" situations. Postcoital contraception started in the 1960's with the administration of large doses of estrogens: 50 mg diethylstilbestrol for 5 days or 5 mg ethinylestradiol for 5 days. In the eighties, a double-blind study compared the original hormonal therapy of 5 mg ethinylestradiol for 5 days with a combination pill containing just 0.1 mg in combination with 1 mg d1-norgestrel, of which two doses are give, the second 12 hours after the first. This method was as effective in preventing pregnancy as the original treatment with high estrogen dosage. Moreover, it resulted in women suffering less nausea and vomiting. One study from Hong Kong indicated that levonorgestrel without ethinylestradiol was as effective as the combination. Postcoital use of an intrauterine device to prevent pregnancy can be used as an alternative to the hormonal method. A recent development is the use of an antiprogestagen pill: 600 mg Mifepristone on day 27 of the cycle; side effects are minimal and the success rate is high. Mifepristone should be registered and made available in all countries for this indication.

REVIEW

Failed emergency contraception

Br-J-Gen-Pract. 1994 Sep; 44(386): 428

Cardy-GC

LETTER

Mifepristone (RU486) and emergency contraception

Med-J-Aust. 1994 Oct 3; 161(7): 403-4

Healy-DL; Evans-AJ

Comment in: Med J Aust 1995 Jan 16;162(2):110

EDITORIAL

Women's knowledge of emergency contraception**Br-J-Gen-Pract. 1994 Oct; 44(387): 451-4**

George-J; Turner-J; Cooke-E; Hennessy-E; Savage-W; Julian-P; Cochrane-R

Comment in: Br J Gen Pract 1995 Feb;45(391):108-9

More widespread use of emergency contraception could help to reduce the number of unwanted pregnancies. **AIM.** The objective of this study was to assess women's knowledge of emergency contraception. **METHOD.** A questionnaire was distributed to 1290 women aged between 16 and 50 years attending 14 general practice surgeries in London over a two-week period in 1990. **RESULTS.** The response rate was 70%. Over three quarters of the women had heard of emergency contraception; these were mainly women who used contraception, who had higher educational qualifications or who were not Muslim. Women who were the most likely to need and to use emergency contraception--those using barrier methods--had no more accurate knowledge than women using any other method of contraception. Only 53% of barrier method users knew emergency contraception could be used as a backup when other methods failed. Only one fifth of women had heard about this method from their general practitioner or any other health professional, while half had obtained their information from the media. **CONCLUSION.** These results suggest that including information on emergency contraception in consultations with users of barrier methods of contraception is a small step which general practitioners and practice nurses could take to increase the use of emergency contraception.

JOURNAL-ARTICLE

Postcoital contraception. Has its day come?

J-Nurse-Midwifery. 1994 Nov-Dec; 39(6): 363-9

Narrigan-D

Although postcoital contraception might aid in reducing the occurrence of some unintended pregnancies, it is seldom used. This review summarizes the development of postcoital methods, focusing on the Yuzpe regimen, the most widely used emergency contraceptive in the United States. The article discusses its mechanism of action, safety, side effects, and effectiveness. Reasons for its limited use are discussed, as are recent findings that RU 486 may be a superior postcoital agent. Finally, a protocol for integrating the Yuzpe method into nurse-midwifery practice is presented.

REVIEW

How frequently is emergency contraception prescribed?**Fam-Plann-Perspect. 1994 Nov-Dec; 26(6): 270-1**

Grossman-RA; Grossman-BD

A 1993 survey of 294 reproductive health care providers, family practitioners and emergency room physicians investigated the frequency of prescribing emergency contraception. Hormonal emergency contraception had been prescribed by respondents an average of 3.4 times in the preceding 12 months. Almost one-third of the prescriptions were for rape victims, the majority written by emergency physicians. Fifteen IUD insertions for emergency contraception were performed in the preceding year. Few respondents had ever discussed emergency contraception with patients or had literature available on the topic.

JOURNAL-ARTICLE

Emergency contraception.**Curr-Opin-Obstet-Gynecol. 1994 Dec; 6(6): 559-63**

Barnhart-KT; Sondheimer-SJ

Emergency contraception is the only form of contraception where implementation can occur after sexual relations or forced intercourse. Hormonal methods can be administered up to 72h after unprotected intercourse. Emergency contraception is safe, legal, and simple to administer. Widespread availability could dramatically decrease the number of unwanted pregnancies.

JOURNAL-ARTICLE

The morning-after pill--how long after?

Am-J-Obstet-Gynecol. 1994 Dec; 171(6): 1529-34

Grou-F; Rodrigues-I

Postcoital contraception has been prescribed for more than two decades. The current regimen is given within 72 hours of unprotected intercourse. After this period, not many choices remain; either the woman may wait until her next menses hoping she is not pregnant or she may have a postcoital intrauterine contraceptive device inserted. Since these alternatives are not always acceptable, we reviewed the literature looking for evidence supporting the current maximum time limit for treatment. Our conclusion is that the limit could theoretically be extended; therefore we think it is time to challenge the time period of current treatment by conducting clinical trials.

REVIEW,-TUTORIAL

Mifepristone (RU486) and emergency contraception

Med-J-Aust. 1995 Jan 16; 162(2): 110

Hewitt-I

Comment on: Med J Aust 1994 Oct 3;161(7):403-4

COMMENT; LETTER

Postcoital contraception: present and future options.**J-Adolesc-Health. 1995 Jan; 16(1): 6-11**

Derman-SG; Peralta-LM

This article reviews information on currently available postcoital contraceptives, and discusses recent advances in postcoital contraception, mostly notably RU 486. **METHODS:** Postcoital contraceptives, or "morning after pills," are currently available in the form of high dose estrogens, oral contraceptives, danazol and intrauterine devices. These methods are plagued by high incidences of side effects and less than optimal success rates. **RESULTS:** Currently, their primary use in the adolescent age group is for victims of sexual assault, but they may also be used as back-up for consensual unprotected intercourse. RU 486, best known as a first trimester abortifacient, has a number of potential uses, including that of a postcoital contraceptive. Two recently published studies from the UK showed RU 486 to have a very low pregnancy rate and fewer side effects when compared with current methods. RU 486 may someday replace high doses of oral contraceptives as the method of choice for postcoital contraception.

REVIEW

Emergency contraception. General practitioner knowledge, attitudes and practices in New

South Wales.**Med-J-Aust. 1995 Feb 6; 162(3): 136-8**

Weisberg-E; Fraser-IS; Carrick-SE; Wilde-FM

To assess the knowledge, attitudes and practices of general practitioners in New South Wales regarding the provision of emergency contraception. **DESIGN:** Randomised group comparison of 100 rural and 100 urban general practitioners (GPs) by questionnaire. **RESULTS:** Eighty-four rural and 76 urban GPs responded. More rural GPs were knowledgeable about emergency contraception than urban GPs (95% v. 78%), and more women knew about it than men. More urban GPs frequently prescribed emergency contraception than rural GPs (26% v. 6%) and female GPs prescribed it more readily than male GPs (22% v. 12%). There was great variation in the regimens prescribed, especially among rural GPs. Twenty-five per cent of urban GPs and 31% of rural GPs did not offer women information about emergency contraception, while 16% of both groups included such information in any discussion about contraceptive options, and 18% gave information only if requested by the woman. More than 60% of the GPs would provide information about emergency contraception as a back-up to use of barrier methods. **CONCLUSIONS:** The sex, attitude and knowledge of the GPs influence the likelihood of women being made aware of or being given emergency contraception in NSW. There is a need to further educate both the public and practitioners about emergency contraception.

RANDOMIZED-CONTROLLED-TRIAL

Emergency contraception

Br-J-Gen-Pract. 1995 Feb; 45(391): 108-9

Ziebland-S; Garcia-P

Comment on: Br J Gen Pract 1994 Oct;44(387):451-4

COMMENT; LETTER

Emergency contraception--why women don't use it.

N-Z-Med-J. 1995 Apr 26; 108(998): 145-8

Young-L; McCowan-LM; Roberts-HE; Farquhar-CM

The aim of the study was to examine knowledge of and perceived availability of the emergency contraceptive pill as well as reasons for its non use. **METHODS.** One hundred women each attending Epsom day unit or the Auckland medical aid clinic in Auckland seeking termination of pregnancy, and 100 women seeking contraceptive advice from the Alice Bush centre in Auckland, were asked to take part in the study. **RESULTS.** At Alice Bush centre 57% of women had previously used the emergency contraceptive pill compared with 43% women at Epsom day unit and 32% women at Auckland medical aid clinic. Only 7% of women attending Epsom day unit or Auckland medical aid clinic had used the emergency contraceptive pill in the month they conceived. When asked why they had not used the emergency contraceptive pill 38% of respondents said they had not heard of it and 41% did not know where to obtain it. Pacific Island women were least likely to have heard of it. Approximately 50% knew the correct time interval for using the emergency contraceptive pill. Sixty two percent attending the abortion clinics would have used the emergency contraceptive pill if they had a supply at home and 57% stated they would have used it if it was available over the counter through pharmacies. **CONCLUSIONS.** The discrepancy between the numbers of women who knew of the emergency contraceptive pill (72%) and the numbers who used it to try to prevent pregnancy (7%) indicates that there are barriers to obtaining and using the emergency contraceptive pill. This study demonstrated a lack of knowledge of the emergency contraceptive pill in women attending the abortion clinics. The majority of women seeking termination of pregnancy would have used the emergency contraceptive pill if they had it available at home or over the counter through a pharmacy. Doctors prescribing the pill and barrier methods of contraception should consider providing a supply of emergency contraceptive pill at the same time and consideration should be given to over the counter prescribing of the emergency contraceptive pill in New Zealand.

JOURNAL-ARTICLE

Extrauterine pregnancy after hormonal postcoital contraception

Zentralbl-Gynakol. 1995; 117(6): 320-2

Sudik-R

Postcoital contraception with estrogen-gestagen-combinations is a highly effective emergency measure in cases of unprotected sexual intercourse at midcycle. Pregnancies after hormonal postcoital contraception are rare and ectopic pregnancies are said to be an extreme rarity. At the Department of Obstetrics and Gynecology of the Philipps-University Marburg we could observe two women with ectopic pregnancies after administration of a ethinyestradiol-levonorgestrel combination (Tetragynon, Schering, Berlin). Both patients were operated by pelviscopy. We could not found a clear causal relationship between the administration of hormonal postcoital contraception and ectopic pregnancies, because both women had intrauterine operations in her history and therefore a certain level of tubal damage could not ruled out. Nevertheless, in cases of hormonal postcoital contraception a follow-up check after 3 weeks should be done and it should be kept in mind that ectopic pregnancies may occur, especially in patients with risk factors.

JOURNAL-ARTICLE

Pregnant teenagers' knowledge and use of emergency contraception

BMJ. 1995 Jun 24; 310(6995): 1644

Pearson-VA; Owen-MR; Phillips-DR; Gray-DJ; Marshall-MN

Comment in: BMJ 1995 Sep 23;311(7008):806. Comment in: BMJ 1995 Sep 23;311(7008):806-7. Comment in: BMJ 1995 Sep 23;311(7008):807

JOURNAL-ARTICLE

Women's knowledge of taking oral contraceptive pills correctly and of emergency contraception: effect of providing information leaflets in general practice.

Br-J-Gen-Pract. 1995 Aug; 45(397): 409-14

Smith-LF; Whitfield-MJ

About one third of all pregnancies are unplanned and 20% of all pregnancies end in abortion. More than 170,000 legal abortions are performed in the United Kingdom annually. Nearly all general practitioners provide contraceptive advice; the most commonly used form of reversible contraception is the oral contraceptive pill. **AIM.** The aim of this study was to determine factors associated with women's knowledge of taking the contraceptive pill correctly and of emergency contraception, and to investigate if their knowledge could be improved in general practice by providing women with Family Planning Association information leaflets. **METHOD.** An uncontrolled intervention study was performed in one rural and one urban English general practice, using a self-completion questionnaire that was initially administered to women attending their general practitioner for oral contraception over six months from 1 October 1992. The questionnaire asked for: sociodemographic information; knowledge of how late women can be taking an oral contraceptive pill and still be protected against unplanned pregnancy; for how many days after being late with a pill they need to use other precautions; sources and methods of emergency contraception; and for how long the methods are effective after the primary contraceptive failure. After completing the questionnaire women were given two leaflets: one about how to take their prescribed contraceptive pill correctly and one about emergency contraception. Three to 12 months later the same questionnaire was administered in the same manner. **RESULTS.** Of 449 women completing the first questionnaire, 233 (52%) completed the second questionnaire. Initially 71% of 406 women taking an oestrogen/progestogen combined pill knew about the '12-hour rule' and 17% knew about the 'seven-day rule'; giving women information about the pill they were taking increased the extent of knowledge about these rules among 212 respondents to 82% ($P < 0.01$) and to 25% ($P < 0.05$), respectively. The proportion of respondents who knew that they could obtain emergency contraception from their own general practitioner, from any general practitioner and from family planning clinics all increased after they had received the leaflets (from 84% to 92%, from 34% to 47% and from 82% to 90%, respectively, all $P < 0.01$). There were significant improvements in the proportion of women knowing the duration of effectiveness of emergency contraception. However, after receiving the leaflet on emergency contraception the majority of women still did not know for how long after unprotected intercourse the high-dose combined pill and the intrauterine contraceptive device were effective (80% and 93% of 233 women, respectively). Improvements in knowledge depended upon women's social class, previous use of emergency contraception and with which practice they were registered. **CONCLUSION.** Providing women with leaflets about taking the contraceptive pill correctly and about emergency contraception appears to improve significantly their extent of such knowledge. If such practice was adopted elsewhere this increased knowledge might reduce the number of unplanned pregnancies in the UK. The effect of general practitioners personally providing such leaflets, with or without verbal instruction, warrants further study.

Emergency contraception**BMJ. 1995 Sep 23; 311(7008): 762-3**

Cayley-J

Comment on: BMJ 1995 Sep 23;311(7008):806. Comment on: BMJ 1995 Sep 23;311(7008):807. Comment in: BMJ 1996 Jan 20;312(7024):184. Comment in: BMJ 1996 Jan 20;312(7024):184-5

COMMENT; EDITORIAL

Pregnant teenagers and contraception. Women know little about emergency contraception, and men know less

BMJ. 1995 Sep 23; 311(7008): 806

Whitlow-BJ; Desmond-N; Hay-P

Comment on: BMJ 1995 Jun 24;310(6995):1644

COMMENT; LETTER

Expanding access to emergency contraception in developing countries.**Stud-Fam-Plann. 1995 Sep-Oct; 26(5): 251-63**

Ellertson-C; Winikoff-B; Armstrong-E; Camp-S; Senanayake-P

Emergency contraception has been called the best-kept contraceptive secret. Previous research shows that several regimens of postcoital contraception offer safe and effective ways for women to avoid pregnancy. Yet the methods are typically unavailable to women in developing countries. In this article, the authors review the main methods of emergency contraception and describe experience with them to date. The prevalence and urgency of the need for making these methods available to women in developing countries are assessed. The necessary elements for creating such access are described. In several developing countries, conditions for introducing the methods may be more favorable than in industrialized countries. These advantages are reviewed. Finally, the authors describe the challenges anticipated for broadening the availability of postcoital methods in the developing world. They conclude with a brief series of recommendations for policymakers.

REVIEW,-TUTORIAL

Consensus statement on emergency contraception.

Contraception. 1995 Oct; 52(4): 211-3

Twenty-four experts from around the world, representing the fields of research, policy, communications, women's advocacy and medicine, gathered at the Rockefeller Foundation Conference Center in Bellagio, Italy, in April 1995 to discuss emergency contraception. The conference was hosted by South-to-South Cooperation in Reproductive Health and co-sponsored by the International Planned Parenthood Federation, Family Health International, the Population Council and the World Health Organization. The conference was supported by the Rockefeller Foundation.

REVIEW

Reasons for pregnancy termination: negligence or failure of contraception?**Acta-Obstet-Gynecol-Scand. 1995 Nov; 74(10): 818-21**

Savonius-H; Pakarinen-P; Sjoberg-L; Kajanoja-P

The aim of the study was to analyze the reasons for the failure of contraception and the reasons for not using any contraception among women seeking a legal abortion on social grounds. The women were also asked about their knowledge of contraception methods, including postcoital contraception. **METHODS.** We interviewed 200 women applying for a legal abortion within the first trimester of pregnancy about contraception, the contraceptive methods used, and the possible reasons for failure of contraception. **RESULTS.** Of all the women interviewed, 93% claimed to have adequate knowledge of contraception. At the time of conception 11.5% used safe methods (OCs 8%, IUDs 3.5%), 63% used less safe methods, and 26% were without contraception. Only 25% of the pill users had no explanation for the failure. 76.7% of the condom users reported that the condom was broken, had slipped off or its use had been irregular. The concern about side effects was the most common reason for not using safe contraceptives (25%). **CONCLUSIONS.** The women claimed to have enough information about contraceptives, and postcoital contraception was also familiar, but the knowledge on how to use them in practice was inadequate. Irregular use and breaks in contraception were common. Despite the data based on Pearl indices, pills failed twice as often as IUDs. Counseling about the proper use of contraceptives is important, although the concern about the side effects appeared to be a big, unsolved problem.

JOURNAL-ARTICLE

Choice and follow-up of contraception without risk factor

Rev-Prat. 1995 Dec 1; 45(19): 2417-21

Drapier-Faure-E

Every young healthy and truly informed woman may use any contraceptive method. Teenagers have to avoid not only pregnancy but also AIDS and other sexually transmitted diseases. Therefore they may use condoms when aware of postcoital contraception or must use both condoms and oral contraceptives. Non smoker women over 40 may choose between combined oral contraceptives, high doses progestogens or IUDs. Whatever the age, newer preparations with desogestrel, norgestimate or gestodene will be preferentially used due to the absence of clinical and metabolic side-effects. Smokers before 35, nonsmoker women over 35 will be preferentially given pills with only 20 micrograms ethinyloestradiol.

REVIEW,-TUTORIAL

Emergency contraception. Care must be taken to ascertain that woman is not already pregnant

BMJ. 1996 Jan 20; 312(7024): 184

Dinwoodie-M

Comment on: BMJ 1995 Sep 23;311(7008):762-3

COMMENT; LETTER

**Emergency contraception. Use of the term is erroneous.
BMJ. 1996 Jan 20; 312(7024): 184-5**

Scotson-J

Comment on: BMJ 1995 Sep 23;311(7008):762-3

COMMENT; LETTER

Nurses who dispense post-coital contraception.

Community Nurse 1996 Jan;1(12):27-8

Thomson R
North West Regional Health Authority, Warrington.

JOURNAL ARTICLE

New Zealand doctors resist emergency contraception

BMJ. 1996 Feb 24; 312(7029): 463

Williams-C

NEWS

History and efficacy of emergency contraception: beyond Coca-Cola.

Fam-Plann-Perspect. 1996 Mar-Apr; 28(2): 44-8

Ellertson-C
Population Council, New York, USA.

HISTORICAL-ARTICLE

Emergency contraception in the United Kingdom and The Netherlands.

Fam-Plann-Perspect. 1996 Mar-Apr; 28(2): 49-51

Glasier-A; Ketting-E; Ellertson-C; Armstrong-E
Family Planning and Well Women Services, Dean Terrace Center, Edinburgh, United Kingdom.

REVIEW,-TUTORIAL

Research on new methods of emergency contraception.**Fam-Plann-Perspect. 1996 Mar-Apr; 28(2): 52-7, 88**

von-Hertzen-H; Van-Look-PF

Special Programme of Research, Development Research Training in Human Reproduction,
World Health Organization (WHO), Geneva, Switzerland.

REVIEW,-TUTORIAL

The effectiveness of the Yuzpe regimen of emergency contraception.

Fam-Plann-Perspect. 1996 Mar-Apr; 28(2): 58-64, 87

Trussell-J; Ellertson-C; Stewart-F

Woodrow Wilson School of Public and International Affairs, Princeton University, N.J., USA.

REVIEW,-TUTORIAL

Emergency Contraception: More Than A Morning After Pill.**Medscape Womens Health 1996 Apr;1(4):1**

Creinin MD

Department of Obstetrics, Gynecology, and Reproductive Sciences at Magee-Womens Hospital, University of Pittsburgh School of Medicine, Pittsburgh, Pa.

Emergency contraception (postcoital contraception, the "morning-after pill") has been available for almost 30 years but remains vastly underutilized. As many as 50% of undesired pregnancies could be prevented with the use of emergency contraception. Currently used regimens include ethinyl estradiol/norgestrel (the Yuzpe regimen) and copper-containing IUDs. The limiting side effects with the Yuzpe regimen are nausea and vomiting. Potential agents of the future include mifepristone and levonorgestrel, which do not include estrogen and thereby minimize nausea and vomiting. More widespread education of physicians and patients about the safety and benefits of emergency contraceptive treatment is necessary.

TUTORIAL

Emergency contraception, a method whose time has come: an update.

Tex-Med. 1996 May; 92(5): 61-3

Brown-HP

Department of Obstetrics and Gynecology, University of Texas Health Science Center, San Antonio, TX 78284-7836, USA.

Unplanned pregnancy is a major public health problem in the United States. Emergency contraception has the potential to significantly decrease the incidence. The Yuzpe regimen is highly effective but woefully underutilized. Mechanisms of action of hormonal emergency contraception will be discussed as well as appropriate indications for use, patient counseling issues, and future methods.

JOURNAL-ARTICLE

Teenagers' knowledge of emergency contraception: questionnaire survey in south east Scotland.

BMJ. 1996 Jun 22; 312(7046): 1567-9

Graham-A; Green-L; Glasier-AF

Edinburgh Healthcare NHS Trust Family Planning and Well Woman Services.

OBJECTIVE--To determine the level of knowledge of emergency contraception among 14 and 15 year olds. **DESIGN**--Confidential questionnaire survey. **SETTING**--10 secondary schools in Lothian, south east Scotland. **SUBJECTS**--1206 pupils predominantly (98.7%) aged 14 and 15 in the fourth year of secondary school. **MAIN OUTCOME MEASURES**--Knowledge of the existence of emergency contraception; of its safety, efficacy, and time limits; and of where to obtain it. **RESULTS**--1121 (93.0%) fourth year pupils aged 14-16 had heard of emergency contraception. 194 girls (32.7%) and 168 boys (27.5%) had experienced sexual intercourse. Of girls who had experienced sexual intercourse, 61 (31.4%) had used emergency contraception. Knowledge of correct time limits was poor, sexually active girls being the most knowledgeable. Pupils attending schools ranked lower than the national average for academic attainment were less likely to have heard of emergency contraception and more likely to have been sexually active. 861 (76.8%) pupils knew they could obtain emergency contraception from their doctor. 925 (82.5%) pupils believed emergency contraception to be effective but 398 (35.5%) thought it more dangerous than the oral contraceptive pill. **CONCLUSIONS**--One third of sexually active girls aged under 16 in Lothian have used emergency contraception. This may help explain the fairly constant teenage pregnancy rates despite increasing sexual activity. Scottish teenagers are well informed about the existence of emergency contraception. However, many do not know when and how to access it properly. Health education initiatives should target teenagers from less academic schools as they are more likely to be sexually active at a young age and are less well informed about emergency contraception.

JOURNAL-ARTICLE

Emergency hormonal contraception usage in genitourinary medicine clinic attenders.**Genitourin-Med. 1996 Jun; 72(3): 217-9**

Evans-JK; Holmes-A; Browning-M; Forster-GE
Ambrose King Centre, Royal London, Hospital, Whitechapel, UK.

OBJECTIVE: To assess the indications for usage of emergency hormonal contraception amongst a population of London genitourinary medicine clinic attenders. **METHODS:** In a prospective study, 150 consecutive women receiving emergency hormonal contraception (EHC) were enrolled. The attending doctor completed a questionnaire of patient details and prescribed EHC with prophylactic prochlorperazine. Follow-up was arranged three weeks later, at which time outcomes and side-effects of therapy were recorded. For those women who did not reattended as planned case notes were reviewed at three months. **RESULTS:** Of 150 women surveyed, 100 (66%) reported contraceptive method failure, 48 (32%) had used no contraception at the time of last sexual intercourse and two requested EHC after sexual assault. Ninety three (62%) reported condom failure, 7 (5%) oral contraceptive pill failure. Seventy five (50%) had used EHC before (range 1-10 times). Seventy one (47%) women reattended within three months. Five (3.3%) of the 150 women were pregnant; none of these cases had experienced nausea or vomiting whilst taking EHC. Side-effects were reported by 22 (31%) of the 71 patients who reattended. Nine (6%) women had been followed-up in the family planning advisory clinic. Of the 71 women who reattended, 39 (55%) reported that their preferred future method of contraception would be condoms. Of the 150 women 19 (13%) underwent tests for sexually transmissible infections within one month of presentation. **CONCLUSIONS:** EHC usage in this population was associated with a failure rate of at least 3.3% and an overall side effect rate of 31%. Despite requests for emergency contraception because of condom failure many elected to continue using condoms as their preferred method of contraception. The majority of women (53%) did not return for follow-up or family planning advice, and so we believe that future contraceptive plans must be addressed at the time EHC is prescribed.

JOURNAL-ARTICLE

The Yuzpe regimen of emergency contraception: how long after the morning after?**Obstet-Gynecol. 1996 Jul; 88(1): 150-4**

Trussell-J; Ellertson-C; Rodriguez-G

Office of Population Research, Princeton University, New Jersey, USA.

OBJECTIVE: To determine whether failure of the Yuzpe method of emergency contraception (which involves taking a higher than usual dose of ordinary combined oral contraceptives within 72 hours after unprotected intercourse, with a second dose taken 12 hours later) depends on the interval between intercourse and treatment. **DATA SOURCES:** We searched the literature for studies in which investigators separately reported both the number of women treated with the Yuzpe regimen and the resulting pregnancies when treatment was started on the first, second, and third days after unprotected intercourse. Searches of the electronic data bases MEDLINE, POPLINE, EMBASE, and BIOSIS were supplemented by scrutiny of the bibliographies of all papers identified through the electronic search. **METHODS OF STUDY SELECTION:** We identified nine published studies that present the number of women treated and outcome of treatment by time since unprotected intercourse. We included all nine studies in our analysis. **TABULATION, INTEGRATION, AND RESULTS:** Differences in failure rates by time of treatment adjusted for study-site effects were analyzed using logistic regression. We found no significant differences in failure rates when therapy was started on the first, second, or third day after unprotected intercourse. The large sample size ensured a power of 76% to reject the null hypothesis of equal failure rates when the odds of failure on the third day are twice those on the first and second days. **CONCLUSION:** Our results have two clinical implications. First, insistence on taking the first dose as soon as possible may be counterproductive in circumstances when taking the second dose 12 hours later would be difficult. Second, clinical protocols that deny treatment after 72 hours may be excessively restrictive, particularly if the alternative of emergency insertion of a copper intrauterine device is not immediately available or appropriate.

REVIEW,-TUTORIAL

Postcoital contraception: who uses the 'morning after pill'?**Aust-N-Z-J-Obstet-Gynaecol. 1996 Aug; 36(3): 347-50**

Pyett-PM

Centre for the Study of Sexually Transmissible Diseases, La Trobe University, Melbourne, Victoria, Australia.

Postcoital contraception (PCC) is a safe and effective method of avoiding unwanted pregnancy after an occurrence of unprotected sex. It nevertheless represents an absence or failure of preventive strategies. Women engaging in unprotected sex may have been exposed to risks of sexually transmissible diseases (STDs) including HIV/AIDS. Family planning service providers have expressed concern at the number of women using this emergency measure as a form of contraception, sometimes repeatedly, but little is known about the sort of women they are and the context in which unprotected sex has occurred. This paper reports the sociodemographic characteristics of women requiring PCC in the two clinical sites of Family Planning Victoria. A self-administered questionnaire was completed by 206 women who required PCC during a 3-month period. The women were aged 14-43 years with an average age of 23 years. Over half the women had used PCC previously and more than a quarter of these women had used it more than twice before. Most of the women had had sex with a regular boyfriend, husband or partner at their own or their partner's home. The main reasons given for needing PCC were nonuse of condoms, condom breakage and missing an oral contraceptive pill.

JOURNAL-ARTICLE

Emergency contraception approval takes unconventional route

Ann Intern Med 1996 Aug 15;125(4):I57

Jones L

NEWS

Emergency contraception with mifepristone and anordrin**Chung-Hua-Fu-Chan-Ko-Tsa-Chih. 1996 Sep; 31(9): 526-9**

Han-X; Weng-L; Xiao-B

Chaoyang Hospital, Capital University of Medical Science, Beijing.

OBJECTIVE: To study the efficacy of mifepristone or with anordrin for emergency contraception. **METHODS:** 300 healthy women were recruited within 7.2 hours after unprotected intercourse or contraceptive failure and randomly allocated into 3 groups. Group 1 (n = 100), mifepristone 25 mg twice with 12 hours apart; group 2 (n = 99), single dose of mifepristone 25 mg; and group 3 (n = 101), mifepristone 25 mg and anordrine 7.5 mg given once. **RESULTS:** No pregnancy occurred in group 1, while 1 pregnancy in each group 2 and 3. The contraceptive effectiveness were 100.0%, 83.8% and 86.1% for the 3 groups respectively. The overall menstruation disturbances and side effects were low. **CONCLUSIONS:** Both mifepristone 50 or 25 mg were effective for emergency contraception and no synergetic effects of anordrin in combination with mifepristone was shown in this study.

CLINICAL-TRIAL

Provision of emergency contraception by nurses: a way forward to increased access**Eur J Contracept Reprod Health Care 1996 Sep;1(3):257-62**

Jarvis RR, Webb A, Kishen M

Bolton Centre for Sexual Health, Bolton General Hospital, UK.

OBJECTIVES: The objectives of the study were to assess the suitability of a service for provision of emergency hormonal contraception by nurses. **METHODS:** Retrospective analysis was carried out of data obtained from the case records of 500 consecutive women who attended ABACUS (a city center-based family planning clinic in Liverpool, UK) for emergency contraception during the 7th and 9th months of the first year (1994) of the service. Similar data were collected for 100 consecutive women during 1 month of the third year (June 1996). The number of women who received emergency hormonal contraception was noted. In particular, details pertaining to the reasons for referral to the doctor and the trend of referrals were noted. **RESULTS:** The results indicate that during the first year the nurses independently issued emergency hormonal contraception to 37% of the women. They referred the remaining 63% to the medical staff. One-third of referrals were for ongoing contraception, especially oral contraception. Another third of referrals appeared to be due to 'nurse anxiety', as no medical or other cause was found for these referrals. During the third year, nurses dispensed emergency hormonal contraception to 64% of women. Among the remaining 36% of women who were referred to the doctor, 19% needed hormonal contraception. Referral reflecting 'nurse anxiety' significantly declined (1%) compared to the first year of service. **CONCLUSIONS:** Ongoing contraception, particularly initiation of oral contraception, was one of the main reasons for referral during the first year. Referral due to 'nurse anxiety' significantly declined with continued experience and may have reflected initial anxiety and the learning curve. With increased experience over the first 2 years, the outcome of this service showed encouraging improvement. The nurses now dispense emergency hormonal contraception to a majority of women.

JOURNAL ARTICLE

Fertility control by emergency contraception.

Adv-Contracept. 1996 Sep; 12(3): 167-72

Glasier-A

Family Planning and Well Woman Services, Edinburgh Healthcare NHS Trust, Scotland.

REVIEW,-TUTORIAL

Effect of post-coital contraceptive methods on the endometrium and the menstrual cycle.**Acta Obstet Gynecol Scand 1996 Sep;75(8):738-44**

Swahn ML; Westlund P; Johannisson E; Bygdeman M
Department of Woman and Child Health, Karolinska Hospital, Stockholm, Sweden.

STUDY OBJECTIVE: To evaluate the effect of treatment with ethinylesteradiol-levonorgestrel or danazol on ovarian function, gonadotrophin release and endometrial development during the time when a pregnancy may occur following unprotected intercourse. **METHODS:** Women with regular menstrual cycles were followed during one control, one treatment and one follow-up month. The women obtained either a combination of 0.5 mg levonorgestrel and 0.1 mg ethinylestradiol (Yuzpe regimen: n = 16) or 600 mg danazol orally and repeated after 12 hours (n = 16). The treatment was administered on either cycle day (cd) 12 or day LH + 2. An endometrial biopsy was obtained once on cd LH + 6 to + 8 in the subjects treated on cd LH + 2 both in control and treatment cycles, and morphometric analysis was performed. The concentrations of LH, pregnandiol (P2G), and estrone (EIG) glucuronide were followed daily in morning urine during control and treatment cycles. **RESULTS:** Following treatment with the Yuzpe regimen on cd 12 the LH surge was either undetectable (three subjects), postponed to cd 16 to 22 (three subjects) or cd 38 to 39 (two subjects) with lower P2G and LH levels than in the control cycle. Following preovulatory treatment with danazol, no LH peak could be detected in four subjects and in the remaining four subjects the LH peak varied between cd 13 and cd 24. The mean area under the curve for LH was significantly lower, the levels of EIG were slightly higher and the P2G levels were unaffected in comparison with the control cycle. Neither of the two treatments administered on cd LH + 2 affected the hormonal pattern and only a discreet effect on the development of the endometrium was seen after the EE/LNG treatment. **CONCLUSION:** The findings indicate that the contraceptive effect of postcoital treatment with EE/LNG and danazol is mainly due to an inhibition or delay of ovulation and insufficient corpus luteum function. The direct effect on the endometrium is limited, if any.

CLINICAL TRIAL

Intrauterine Devices: Separating Fact From Fallacy.**Medscape Womens Health 1996 Oct;1(10):4**

Creinin MD

Department of Obstetrics, Gynecology, and Reproductive Sciences at Magee-Womens Hospital, University of Pittsburgh School of Medicine, Pittsburgh, Pa.

IUDs currently available in the US provide safe and effective contraception. History has falsely led patients and clinicians alike to believe that IUDs are unsafe. For a woman in a long-standing, mutually monogamous relationship, no method of reversible contraception is more effective. The main risk associated with an IUD is infection; this is usually related to insertion, and the risk lasts for approximately 20 days. Currently available IUDs work by various mechanisms to prevent fertilization. The copper-containing IUD is also a highly effective form of emergency contraception. It is important for clinicians to re-educate themselves and their patients about the importance of the IUD as an option for contraception.

TUTORIAL

Abortion and emergency contraception: Chinese experience.

Chin Med J (Engl) 1997 Jan;110(1):36-42

Xiao B

National Research Institute for Family Planning, Beijing, China.

REVIEW, TUTORIAL

Ethinyl oestradiol plus dl-norgestrel or levonorgestrel in the Yuzpe method for post-coital contraception: results of an observational study.

Hum Reprod 1996 Nov;11(11):2449-53

Sanchez-Borrego R; Balasch
Diatros Family Planning Center, Barcelona, Spain.

This observational study compares the efficacy and incidence of side-effects between dl-norgestrel (2 mg) and levonorgestrel (1 mg) associated with ethinyl oestradiol (200 micrograms) given in two doses 12 h apart for emergency post-coital contraception. A total of 117 consecutive women were given dl-norgestrel in combination with the oestrogen (dl-norgestrel group) while 423 consecutive subjects received the combination ethinyl oestradiol/levonorgestrel (levonorgestrel group). Overall, four (0.8%) pregnancies occurred in the 540 treated women, one (0.9%) in the dl-norgestrel group and three (0.7%) in the levonorgestrel group. In addition to this similar high contraceptive efficacy between both study groups, women in the levonorgestrel group had a significantly lower incidence of side-effects (23.5%) and better timing of the next menstruation after treatment (75% had bleeding on time) than those in the dl-norgestrel group (corresponding figures were 50.5 and 62.6% respectively). It is concluded that levonorgestrel should be used in preference to dl-norgestrel for post-coital contraception in the Yuzpe regimen.

JOURNAL ARTICLE

Emergency contraception: a survey of women's knowledge and attitudes.**Br-J-Obstet-Gynaecol. 1996 Nov; 103(11): 1109-16**

Smith-BH; Gurney-EM; Aboulela-L; Templeton-A
Department of General Practice, University of Aberdeen, UK.

OBJECTIVES: To assess women's knowledge and attitudes in relation to emergency contraception and to identify ways in which these might be improved. **DESIGN:** Postal survey: questionnaire seeking level of knowledge of emergency contraception, and attitudes to use, publicity and availability. **POPULATION:** A stratified random sample of 2000 Grampian women aged 18 to 47. Women were identified through the Community Health Index. **RESULTS:** Most women (94%) were aware of emergency contraception and identified an appropriate source. Fewer (39%) knew the correct timing for its use. These figures were generally higher among younger, single women. The popular media represented the commonest source of information, and GPs and Family Planning Clinics were cited rarely. Increased advertising was considered desirable by 71% (mainly older women); only 36% (mainly younger, single women) considered over-the-counter availability desirable. Reasons for these responses and factors influencing them were explored. **CONCLUSIONS:** Knowledge of emergency contraception is greatest among those most likely to use it, but deficient mainly in relation to the correct timing for its use and to intrauterine methods. Publicity should concentrate on the timing of its use. The popular media are an important publicity vehicle, but health professionals appear to be under-used. Many women hold opinions on advertising and over-the-counter availability of emergency contraception which will have to be considered if deregulation proceeds.

JOURNAL-ARTICLE

Contraceptive practices of women requesting termination of pregnancy: a study from China.**Contraception. 1997 Jan; 55(1): 15-7**

Cheng-Y; Zhu-W; Li-Z; Zhang-Y; Wang-A

National Research Institute for Family Planning, Beijing, P.R China.

In order to develop a program for prevention of unwanted pregnancies, we conducted a survey of contraceptive practices and reasons for contraceptive failures of 1520 women seeking abortion at eight large hospitals in Zheng Zhou City, Henan Province, P.R. China, during the period from March 1996 to May 1996. The most frequent cause of the unplanned pregnancy was contraceptive failure (71.9%) 61.7% (938) of these current pregnancies were potentially predictable by virtue of nonuse of contraception (427) or by recognition of contraceptive failures (511). Among the contraceptive failures, the proportion of condom mishaps was the highest (29.7%), next was IUD failures (23.5%), then rhythm miscalculation (15.9%). Most of abortion seekers (77.1%) used some contraceptive methods previously. But only 19.7% of them used a contraceptive method at the first sexual intercourse. Among 1520 abortion seekers. 57.6% had used condoms previously; 50.9% of the condom users had at least one instance of condom mishap. The rhythm method had been used by 31.7% of abortion seekers previously; 59.1% of the rhythm users had at least one instance of rhythm failure. Of the 16.8% of abortion seekers who had used pills, 58.0% of them had pill failures. Among condom and pill failures, most of them (46.4% condom users and 56.0%, pill users) belonged to the users failure category (poor compliance). Of those seeking abortion 56.4% had experienced at least one instance of previous abortion; 5.3% had experienced previous abortions at least two times. Emergency contraception had been utilized by only 10 subjects prior to this current pregnancy.

MULTICENTER-STUDY

Emergency postcoital contraception.

Nurs Spectr (Wash D C) 1997 Jan 27;7(2):15

Nichols A; Wilson J

JOURNAL ARTICLE

Gestagens, danazol and antiprogestogen in emergency contraception.

Eur J Contracept Reprod Health Care 1997 Jun;2(2):127-9

Webb AM

North Mersey Community (NHS) Trust, Abacus, Liverpool, UK.

REVIEW, TUTORIAL

Emergency contraception: a national survey of adolescent health experts.**Fam-Plann-Perspect. 1997 Jan-Feb; 29(1): 15-9, 24**

Gold-MA; Schein-A; Coupey-SM

Division of General Academic Pediatrics/Adolescent Medicine, Children's Hospital of Pittsburgh, USA.

In a survey of 167 physicians with expertise in adolescent health, 84% said they prescribe contraception to adolescents, but only 80% of these prescribe emergency contraception, generally a few times a year at most. Some 12% of respondents said they believe that providing emergency contraception to adolescents would encourage contraceptive risk-taking, 25% said they think it would discourage correct use of other methods and 29% said they think repeated use of the method could post health risks. Physicians who were more likely than their colleagues to prescribe emergency contraception included obstetrician-gynecologists (92%), those who graduated from medical school after 1970 (77%) and those who describe their practice as being in an "academic" setting (76%). Physicians may restrict use of the method by limiting treatment to adolescents who seek it within 48 hours after unprotected intercourse (29%), by requiring a pregnancy test (64%) or an office visit (68%), or by using the timing of menses as a criterion for providing the method (46%). While 41% of physicians who provide emergency contraception counsel adolescents about the method during family planning visits, only 28% do so during visits for routine health care; 16% counsel women who are not yet sexually active about the method.

JOURNAL-ARTICLE

Anti-implantation activity of luteal phase mifepristone administration is not mimicked by prostaglandin synthesis inhibitor or prostaglandin analogue in the rhesus monkey.

Contraception. 1997 Feb; 55(2): 103-14

Nayak-NR; Ghosh-D; Lasley-BL; Sengupta-J

Department of Physiology, All India Institute of Medical Sciences, New Delhi, India.

The use of mifepristone as an anti-implantation agent in the primate has been explored in the rhesus monkey with two specific aims: (i) to determine the contraceptive efficacy of very low-dose mifepristone administered on mated cycle days 16, 17, and 18; and (ii) to test the hypothesis that alteration in endometrial prostaglandin milieu by using either prostaglandin analogue or prostaglandin synthesis inhibitor can intervene the antifertility effect induced by mifepristone. Thirty female monkeys were randomly assigned to one of the six treatment groups. Five monkeys in the control group (group 1) were subjected to mating during cycle days 8-22. Four out of five monkeys became pregnant in the first mated cycle (80%) with detection of serum mCG by 12.7 +/- 1.5 days after ovulation. In group 2, 12 mated cycles were studied in five monkeys, mifepristone [RU486, 2 mg/day/animal, s.c. in 1 ml vehicle (1:4, benzyl benzoate:olive oil, v/v)] was given on cycle days 16, 17, and 18. In this group, no pregnancy was observed, thus providing complete pregnancy protection. Though there was an apparent extension of treatment cycle lengths in five cases with no incidence of inter-menstrual bleeding or spotting, there were no significant changes in serum estradiol (E) and progesterone (P). In group 3, four monkeys received prostaglandin (PG) synthesis inhibitor, diclofenac sodium (D, 25 mg/day/animal, i.m.) on cycle days 16, 17, and 18 in seven ovulatory menstrual cycles. Four of these cycles (57%) resulted in normal pregnancies; however, mCG detection (16.8 +/- 1.2 days after ovulation) was significantly ($p < 0.05$) delayed as compared to group 1. In group 4, four monkeys received 100 micrograms misoprostol (M), a PGE1 analogue, by gavage on mated cycle days 16, 17, and 18. Four pregnancies occurred in five treatment cycles (80%) with normal profiles of serum E and P. mCG was first detected 13.2 +/- 1.7 days after ovulation. In group 5, seven monkeys received same dosages of RU486 and D on mated cycle days 16, 17, and 18. One hundred percent pregnancy protection was observed with luteal phase lengthening in eight treatment cycles but with unaltered E and P profiles. In group 6, five monkeys in nine treatment cycles received same dosages of RU486 and M on mated cycle days 16, 17, and 18. One pregnancy occurred; evaluation of E and P levels showed that the drug was given in the preovulatory period, which delayed ovulation and implantation, as mCG was detected 19 days post-ovulation. A delay in vaginal bleeding was observed in four treatment cycles with unaltered E and P profiles. Low-dose mifepristone appears to be a potential candidate for luteal phase and post-coital emergency contraception. However, the hypothesis that altered endometrial prostaglandin milieu may be responsible for mediating the anti-implantation effect of RU486 does not appear to be tenable based on our results in the rhesus monkey.

[Pregnancy interruption in Switzerland 1942-1996] Schwangerschaftsabbruch in der Schweiz 1942-1996. (IN GERMAN)

Schweiz-Rundsch-Med-Prax. 1997 Feb 25; 86(9): 340-7

Dondenaz-M; Gutzwiller-F; Rey-AM; Stamm-H

In spite of restrictive legislation, practice of legal abortion has become liberal in Switzerland, bringing illegal abortions to disappear. Moreover, sex education and widespread contraception have reduced the number of legal abortions. Today, in spite of liberalization, the abortion rate is among the lowest worldwide. Prevention targeted specifically at migrant women and spreading knowledge about postcoital contraception might reduce it further. Liberalization in practice must be followed by liberalizing legislation.

JOURNAL-ARTICLE

**ACOG practice patterns. Emergency oral contraception. Number 2, October 1996.
American College of Obstetricians and Gynecologists.**

Int J Gynaecol Obstet 1997 Feb;56(2):203-10

PRACTICE GUIDELINE

A reassessment of efficacy of the Yuzpe regimen of emergency contraception.**Hum-Reprod. 1997 Mar; 12(3): 496-8**

Creinin-MD

University of Pittsburgh School of Medicine, Department of Obstetrics, Gynecology and Reproductive Sciences, Magee-Women's Hospital, USA.

This review discusses the available data reporting the efficacy of emergency contraceptive treatment with the Yuzpe regimen (0.2 mg of ethinyl oestradiol in combination with either 2.0 mg of norgestrel or 1.0 mg of levonorgestrel) and evaluates the true effectiveness in preventing pregnancy. A literature review was completed for reports including women treated with the Yuzpe using a MEDLINE search for articles published since 1970 and by reviewing the secondary reference lists of these manuscripts. Expected pregnancy rates for each study population were calculated using published conception rate estimates. Seven published studies provided adequate data to assess accurately efficacy of the Yuzpe regimen in preventing pregnancy after unprotected intercourse. Of 2871 women treated, 54 (1.9%, 95% confidence intervals (CI) 1.4-2.4) became pregnant. By calculating the expected pregnancy rates using two different methodologies, the Yuzpe regimen decreased the observed number of pregnancies by 70.0% (95% CI 63.3-76.7) and 77.2% (95% CI 71.5-82.8). Emergency contraception with the Yuzpe regimen is an effective form of contraception to prevent unwanted pregnancy after unprotected intercourse.

REVIEW,-TUTORIAL

Knowledge and use of emergency contraception among women seeking termination of pregnancy in New South Wales

Med-J-Aust. 1997 Mar 17; 166(6): 336

Weisberg-E; Fraser-IS

LETTER

Knowledge and use of hormonal emergency contraception in Finland.**Contraception. 1997 Mar; 55(3): 153-7**

Kosunen-E; Sihvo-S; Hemminki-E
University of Tampere, Medical School, Finland.

We studied the knowledge and use of hormonal emergency contraception (EC) in Finland by mailing a questionnaire to a national sample of 3000 women aged 18-44 years (response rate 74%). Ten percent of the women aged under 25 and 4% of all respondents had sometimes used EC. Unmarried women were more likely to report having used hormonal EC than were married women, and nulliparous women reported more use than did parous women. However, no statistically significant difference in EC use among women with or without previous abortion history was observed. Older women were less aware of EC than of other methods; only one-third of the women aged over 35 knew about this method. Current contraceptive practices were otherwise similar among ever-users and never-users of EC, but EC users more commonly reported using condom together with oral contraceptives or IUD. Nobody reported using EC as her only contraceptive method. Our findings suggest that EC is appropriately used in Finland, but more information about use of the method is still needed.

JOURNAL-ARTICLE

Emergency contraception: the nurse's role in providing postcoital options.**J-Obstet-Gynecol-Neonatal-Nurs. 1997 Mar-Apr; 26(2): 145-52**

Lindberg-CE

Henry P. Becton School of Nursing and Allied Health, Fairleigh Dickinson University, Teaneck, NJ, USA.

Emergency contraception refers to pregnancy prevention methods initiated after unprotected sexual intercourse. Research has shown that 75% of the 3.5 million unintended pregnancies that occur in the United States every year could be prevented through use of emergency contraception. Hormonal methods and postcoital insertion of intrauterine devices have been shown to be safe and effective. Nurses play an essential role in the distribution of emergency contraception as patient educators, advocates, and support persons.

REVIEW,-TUTORIAL

Religious freedom, reproductive health care, and hospital mergers.**J Am Med Womens Assoc 1997 Spring;52(2):65-8**

Gallagher J

City University of New York Law School, Queens, USA.

This article examines the impact of hospital mergers and the formation of health care networks involving religious hospitals on the provision of reproductive health care. Although instances of access to such services being curtailed at non-Catholic religious facilities have been reported, no systematic study of hospitals owned by other religious denominations has yet been done. Accordingly, the author focuses on Roman Catholic institutions and policies. Efforts by Roman Catholic Bishops to enforce the Ethical and Religious Directives for Catholic Health Care Services on new institutional partners has led to the elimination of or severe restrictions on patient access to abortion, contraception, infertility treatments, and even to emergency contraception for rape victims. The article suggests steps that physicians, patients, and community organizations and activists can take to safeguard reproductive health care as new institutional and professional relationships are formed.

JOURNAL ARTICLE

ACOG releases a report on emergency oral contraception.

Am Fam Physician 1997 Apr;55(5):1976-1979

PRACTICE GUIDELINE

FDA seeks new-drug applications for 'morning-after' contraception

Am J Health Syst Pharm 1997 Apr 15;54(8):874, 877

NEWS

Emergency contraception--parsimony and prevention in the medicine cabinet.

Am-J-Public-Health. 1997 Jun; 87(6): 909-10

Cates-W Jr; Raymond-EG

Family Health International, Research Triangle Park, N.C., USA.

Comment on: Am J Public Health 1997 Jun;87(6):932-7

JOURNAL-ARTICLE

Hormonal postcoital contraception

Eur J Contracept Reprod Health Care 1997 Jun;2(2):101-4

Kubba AA

Lambeth Health Care Trust, London, UK.

Wide availability of hormonal postcoital contraception (HPC) is likely to reduce the incidence of unplanned pregnancies. The two most common indications for HPC are unprotected intercourse and 'condom accidents'. The combined estrogen/progestogen HPC described by Yuzpe is the most widely used method. It is given within 72 h of unprotected intercourse. The efficacy of combined HPC is high. The crude failure rate is 1-5 per 100 woman-months while the true reduction in pregnancy risk is over 75%. Efficacy is not influenced by the exposure-treatment interval within the 72-h 'window'. The mechanisms of action is multifocal and depends on the cycle phase at which treatment is instituted. Data are presented suggesting a consistent endometrial effect. None of the side-effects of HPC are serious. When HPC fails, there is so far no evidence of an adverse effect of the treatment on the outcome of pregnancy. Counselling should include all the above together with discussion of possible side-effects such as nausea and vomiting. The clinician should ensure that the woman uses an effective contraceptive thereafter. There is renewed interest in progestogen-only postcoital contraception. Varying doses of levonorgestrel have been used. The efficacy of some regimens is similar to that of the combined HPC. Danazol has not proved to be as effective. Antiprogestins hold the greatest promise of emergency contraception with high efficacy and low side-effects.

REVIEW, TUTORIAL

Trying to prevent abortion

Eur J Contracept Reprod Health Care 1997 Jun;2(2):81-7

Bromham DR, Oloto EJ

Academic Division of Obstetrics and Gynaecology, St. James's University Hospital, Leeds, UK.

It is known that, since antiquity, women confronted with an unwanted pregnancy have used abortion as a means of resolving their dilemma. Although undoubtedly widely used in all historical ages, abortion has come to be regarded as an event preferably avoided because of the impact on the women concerned as well as considerations for fetal life. Policies to reduce numbers and rates of abortion must acknowledge certain observations. Criminalization does not prevent abortion but increases maternal risks. A society's 'openness' in discussing sexual matters inversely correlates with abortion rates. Correlation between contraceptive use and abortion is also inverse but relates most closely to the efficacy of contraceptive methods used. 'Revolution' in the range of contraceptive methods used will have an equivalent impact on abortion rates. Secondary or emergency contraceptive methods have a considerable role to play in the reduction of abortion numbers. Good sex (and 'relationships') education programs may delay sexual debut, increase contraceptive usage and be associated with reduced abortion. Finally, interaction between socioeconomic factors and the choice between abortion and ongoing pregnancy are complex. Abortion is not necessarily chosen by those least able to support a child financially.

REVIEW, TUTORIAL

Little knowledge and limited practice: emergency contraceptive pills, the public, and the obstetrician-gynecologist.

Obstet-Gynecol. 1997 Jun; 89(6): 1006-11

Delbanco-SF; Mauldon-J; Smith-MD

Henry J. Kaiser Family Foundation, Menlo Park, California, USA.

OBJECTIVE: To assess Americans' knowledge and attitudes about emergency contraceptive pills and the knowledge, attitudes, and practices of obstetrician-gynecologists with respect to emergency contraceptive pills. **METHODS:** A random sample of a national cross-section of 2002 Americans, age 18 and older, including 1000 women and 1002 men, was surveyed by telephone between October 12 and November 13, 1994. A nationally representative sample of 307 obstetrician-gynecologists, whose names were drawn from the American Medical Association Physicians' Masterfile, was surveyed by telephone between February 1 and March 21, 1995. Both Surveys addressed knowledge and attitudes about unplanned pregnancy and contraception options, including emergency contraception. Despite response rates of 50 and 77%, respectively, both unweighted samples closely mirror the populations from which they were drawn. **RESULTS:** Americans are not well informed about emergency contraceptive pills. Only 36% of respondents indicated that they knew "anything could be done" within a few days after unprotected sex to prevent pregnancy. Fifty-five percent said they had "heard of" emergency contraceptive pills, and only 1% had ever used them. Ninety-nine percent of obstetrician-gynecologists reported being "familiar" with emergency contraceptive pills. Twenty-two percent were "somewhat familiar." Among those who said they were "very familiar" with the method (77%), the majority considered emergency contraceptive pills to be "very safe" (88%) and "very effective" (85%). Overall, 70% of obstetrician-gynecologists surveyed said they had prescribed emergency contraceptive pills within the last year, but on an infrequent basis; 77% of those who prescribed emergency contraceptive pills did so five or fewer times. **CONCLUSION:** Public knowledge about the availability and use of emergency contraceptive pills is limited, as is the practice of prescribing the pills among obstetrician-gynecologists. Because patients rely on health care providers for information on birth control, health care providers can improve knowledge about the availability of emergency contraceptive pills among their patients.

JOURNAL-ARTICLE

Preventing unintended pregnancy: the cost-effectiveness of three methods of emergency contraception

Am-J-Public-Health. 1997 Jun; 87(6): 932-7

Trussell-J; Koenig-J; Ellertson-C; Stewart-F

Woodrow Wilson School of Public and International Affairs, Princeton University, NJ 08544-2091, USA.

OBJECTIVES: This study examined the cost-effectiveness of emergency contraceptive pills, minipills, and the copper-T intrauterine device (IUD) as emergency contraception. **METHODS:** Cost savings were modeled for both (1) a single contraceptive treatment following unprotected intercourse and (2) emergency contraceptive pills provided in advance. **RESULTS:** In a managed care (public payer) setting, a single treatment of emergency contraception after unprotected intercourse saves \$142 (\$54) with emergency contraceptive pills and \$119 (\$29) with minipills. The copper-T IUD is not cost-effective as an emergency contraceptive alone, but savings quickly accrue as use continues. Advance provision of emergency contraceptive pills to women using barrier contraceptives, spermicides, withdrawal, or periodic abstinence saves from \$263 to \$498 (\$99 to \$205) annually. **CONCLUSIONS:** Emergency contraception is cost-effective whether provided when the emergency arises or in advance to be used as needed. Greater use of emergency contraception could reduce the considerable medical and social costs of unintended pregnancies.

Comment in: Am J Public Health 1997 Jun;87(6):909-10

JOURNAL-ARTICLE

Intrauterine contraception in adolescent women. The GyneFix intrauterine implant. Ildemeersch-D; Van-Kets-H; Vrijens-M; Delbarghe-W; Van-Trappen-Y;

Ann-N-Y-Acad-Sci. 1997 Jun 17; 816: 440-50

Temmerman-M; Depypere-H; Thiery-M

Department of Obstetrics and Gynaecology, University of Ghent, Belgium.

Pregnancy rates among adolescents have not decreased over the last 10 years, despite numerous efforts. To solve this important health problem, the major strategy recommended is to encourage contraceptive use among sexually active teenagers. An important means of obtaining this is by promoting methods that are not dependent on daily administration in order to avoid noncompliance. One such method (Norplant) has already shown to be much more effective than the combination pill in preventing pregnancy in adolescent women. The frameless intrauterine implant system (fixed, frameless, and completely flexible) has been studied since 1985 in women between 14 and 50 years of age. The results in young nulligravid women confirm its very high effectiveness (cumulative pregnancy rate at 36 months: 1.4%), its low expulsion rate (cumulative rate at 36 months: 0.9%) and its optimal tolerance (cumulative removal rate for medical reasons at 36 months: 2.4%), resulting in a high acceptance of the implant and a high continued use. The system (GyneFix) offers long-term protection (5 years), and its insertion, with or without anesthetic, is easily accomplished in the office. The GyneFix should therefore be recommended as an excellent alternative for birth control pills for young women with low risk for STDs, especially when compliance is a problem, without an increased risk for complications and without systemic side effects. Removal of the device is accomplished by traction on the tail. It can also be used for emergency contraception and for insertion immediately after termination of pregnancy.

MULTICENTER-STUDY

Implantable hormonal and emergency contraception.**Curr-Opin-Obstet-Gynecol. 1997 Jun; 9(3): 169-74**

Cullins-VE; Garcia-FA

Department of Obstetrics and Gynecology, Johns Hopkins Bayview Medical Center, Baltimore, MD 21224, USA.

Recent publications about emergency and implantable contraception focused on increasing the awareness about emergency contraceptive methods and on updating readers about the controversies surrounding Norplant. Both emergency and implantable contraception have excellent safety and efficacy profiles, yet neither has realized its potential for widespread use. This review addresses these concerns and attempts to place these issues in perspective.

REVIEW,-TUTORIAL

Campaign launched to tell physicians, public about emergency contraception

JAMA. 1997 Jul 9; 278(2): 101-2

Skolnick-AA

NEWS

Administration of medicines by emergency nurse practitioners according to protocols in an accident and emergency department [published erratum appears in J Accid Emerg Med 1997 Sep;14(5):350]

J Accid Emerg Med 1997 Jul;14(4):233-7

Marshall J; Edwards C; Lambert M

Accident and Emergency Department, Norfolk and Norwich Hospital.

OBJECTIVE: To present the legal and professional issues related to nurse administration of drugs according to protocols, and describe the implementation and initial audit findings of such a scheme. **SETTING:** Accident and emergency (A&E) department of a district general hospital. **METHODS:** Analysis of legal and professional opinion. Protocols acceptable to the medical, nursing, and pharmacy professions were developed across a wide range of drugs appropriate for administration by accident and emergency nurse practitioners (ENPs). The first six months of the scheme were audited. Audit initially addressed general compliance with protocols and later the specific areas of tetanus immunisation and emergency contraception. **RESULTS:** ENPs assessed 2925 patients in six months (10.9% of all new patients); 455 patients (15.5% of the ENP patients) were given drugs according to protocols. There were no breaches of the protocols. Subsequent audit of tetanus immunisation showed 94-100% compliance with protocol standards and 71- 100% compliance for emergency contraception. **CONCLUSIONS:** There are no legal or professional obstacles to the development of protocols for the administration of drugs to patients by nurses without reference to a doctor, providing the protocols meet all the requirements of the UKCC and have the support of consultant medical staff. Such a system must be subject to regular audit to promote a dynamic approach to protocols and training. The system safely enhanced the quality of care of patients treated by ENPs in A&E.

JOURNAL ARTICLE

Current practice of family planning in China.**Int J Gynaecol Obstet 1997 Jul;58(1):59-67**

Xiao BL; Zhao BG

National Research Institute for Family Planning, Beijing, People's Republic of China.

Current practice of family planning in China is based on the population policy and strategy of the country. Comprehensive contraceptive methods are provided in family planning clinics at all levels. Among the methods used, intrauterine devices and tubal sterilization are most popular. Vasectomy is popular in some provinces. Oral pills, injectables and subdermal implants occupy a small proportion. Incidence of abortion is high due to failure of methods and unprotected intercourse. Attention is paid to the adoption of emergency contraception to prevent unwanted pregnancy. Improvement in quality of care is the key to a successful family planning program. Basic research is essential for development of new contraceptive technology.

JOURNAL ARTICLE

Emergency contraception: a second chance at preventing adolescent unintended pregnancy.

Curr Opin Pediatr 1997 Aug;9(4):300-9

Gold MA

Section of Adolescent Medicine, Children's Hospital of Pittsburgh, PA 15213, USA.

Adolescent pregnancy challenges the United States and Europe. For most sexually active adolescents, pregnancy is unintended. Emergency contraception, also called the "morning-after treatment" or postcoital contraception is a way to prevent pregnancy after unprotected intercourse. In February 1997, the Food and Drug Administration (FDA) approved the use of certain oral contraceptive pills for emergency contraception. There are currently six brands of pills marketed in the United States that can be prescribed to, conform to the FDA-approved regimen. When emergency contraceptive pills are initiated within 72 hours of unprotected intercourse, they reduce the risk of pregnancy by 75%. Contraindications are the same as those used for ongoing contraceptive pills. The most common side effects are nausea, vomiting, menstrual disturbances, breast tenderness, abdominal cramping, dizziness, headache, and mood changes. Routinely counseling all adolescents about emergency contraceptive pills and increasing access to them can give adolescents a second chance at preventing pregnancy.

REVIEW, TUTORIAL

Teenagers' use of emergency contraception in a general practice.**J R Soc Med 1997 Aug;90(8):443-4**

Seamark CJ; Pereira Gray DJ

Institute of General Practice, University of Exeter, Postgraduate Medical School, England.

British teenagers who become pregnant commonly express ignorance about emergency contraception. A case-note survey was conducted in a general practice serving about 14,200 people in a Devon market town. Of the 373 registered girls aged 15-19 years, 59 (16%) had consulted for emergency contraception, 19 of them more than once. The oral method (Yuzpe regimen) was prescribed eighty times and 2 girls became pregnant. 4 of the 59 girls who used emergency contraception had subsequent unwanted pregnancies. A consultation for emergency contraception presents an opportunity to discuss more reliable and acceptable methods of contraception.

JOURNAL ARTICLE

Raising awareness of emergency contraception.

Community Nurse 1997 Aug;3(7):28-9

Bullock J

JOURNAL ARTICLE

Postcoital contraception. An emergency option (IN SPANISH)**Rev Enferm 1997 Sep;20(229):74-7**

Rozas Garcia MR

E.U.E. Universidad de Barcelona.

In recent years, there has been a marked increase in the demand for postcoital contraception in both primary care centers and hospital emergency wards. This article proposes to assure professional nurses acquire adequate basic knowledge regarding this emergency contraceptive method. Due to the fact that nurses play a major role in providing women who seek this method a health education, we believe it is of importance to deal with this aspect carefully while discussing this topic.

JOURNAL ARTICLE

Postcoital contraception. Dates based on a 5-year use in a private consultation service (IN ITALIAN)

Minerva Ginecol 1997 Sep;49(9):399-404

Marletta A; Artuso A; Fabbri A

BACKGROUND: The aim of this 5-year retrospective study is to define the efficacy of oestro-progestinic interception. **METHODS:** An oestro- progestinic mixture (0.05 mg ethinyl estradiol and 0.250 mg dlnorgestrel) was prescribed to 6003 women attending the gynaecological outpatients clinic of AIED (Associazione Italiana per l'Educazione Demografica) in Genoa, Italy, without evidence of any previous contra- indications. The prescription was of two pills at once and two pills 12 hours after. Before examination, the doctor asked for personal and medical history (age, date of onset of menses, unprotected intercourse date and anticonceptual failure); patients were also asked to report the data of the following menses to the clinic. The largest age range was between 20 and 24 years, probably because of their inadequate knowledge of contraceptives. The reasons for post-coital contraception were: sexual intercourse without contraceptive, failure of coitus interruptus and of the condom. **RESULTS:** Post-coital interception efficacy (monthly oestro-progestinic contraception was 99.5%) according to retrospective statistical analysis, was according to Pearl index 92.9% vs 50% without any contraceptive. **CONCLUSIONS:** Finally, the efficacy of this method, together with its easy management and low frequency of severe contra-indications, allows us to indicate the "morning after pill" as one of the most useful outpatient strategies to avoid unwanted pregnancies.

JOURNAL ARTICLE

The use and effects of postcoital contraception (IN SPANISH)**Aten Primaria 1997 Oct 15;20(6):305-10**

Sueiro E; Perdiz C; Gayoso P; Doval JL
Centro de Orientacion Familiar Novoa Santos, Ourense.

OBJECTIVES: To find those people seeking post-coital contraception (PCC), its efficacy and effects. **DESIGN:** A crossover study using a structured questionnaire, filled in both at the moment of demand and after using PCC. **SETTING:** The "Novoa Santos" Family Planning Centre in Ourense. **PARTICIPANTS:** All those requesting PCC between January 1995 and June 1996 (220 in all). **INTERVENTIONS:** The PCC norm was 8 pills, two taken every 12 hours, of 0.05 mg of Ethinyloestradiol (EE) plus 0.5 mg of Norgestrel. **MEASURES AND MAIN RESULTS:** We analysed social and demographic variables, sexual behaviour and PCC use with the SPSS programme for Windows. 96.4% attending were women, average age 21.98. They began coitus at 18.58 years old. 191 (86.8%) had a stable partner and 0 to 3 coitus per week. The condom was the commonest method (90.6%). **CONCLUSIONS:** Young women requesting PCC immediately after the risk coitus are students and residents in the city. It is a method used when there are problems with the condom and the frequency of failure is low. Sexually active people should be informed of the existence and use of PCC, as should the health professionals who could be asked for it.

JOURNAL ARTICLE

Emergency postcoital contraception

N Engl J Med 1997 Oct 9;337(15):1058-64

Glasier A

Edinburgh Healthcare Trust Family Planning and Well Woman Services, Scotland, United Kingdom.

Comment in: N Engl J Med 1997 Oct 9;337(15):1078-9

Comment in: N Engl J Med 1998 Feb 12;338(7):476-7

REVIEW, TUTORIAL

Emergency contraception--expanding opportunities for primary prevention

N Engl J Med 1997 Oct 9;337(15):1078-9

Grimes DA

Comment on: N Engl J Med 1997 Oct 9;337(15):1058-64

COMMENT; EDITORIAL

Emergency contraception. The pill's little-known secret goes public.

AWHONN Lifelines 1997 Oct;1(5):28-31

Chez RA; Chapin J
University of South Florida in Tampa, USA.

JOURNAL ARTICLE

Use of contraception in women who present for termination of pregnancy in inner London.

Public Health 1997 Nov;111(6):377-82

Price SJ; Barrett G; Smith C; Paterson C

Department of Public Health, Kensington and Chelsea and Westminster Health Commissioning Agency, London.

OBJECTIVES: To describe the contraceptive usage of women undergoing termination of pregnancy in order to identify problems with contraception, and therefore suggest ways in which contraceptive services can be improved. **DESIGN:** Prospective study of attenders for NHS termination of pregnancy over a three month period. **SETTING:** Community based assessment clinics for NHS termination of pregnancy in inner London. **SUBJECTS:** Two hundred and sixty-nine women asking for assessment for NHS termination of pregnancy. **MAIN OUTCOME MEASURES:** Source of contraception, method used around time of conception, and problems experienced. **RESULTS:** Respondents fell into three groups: those using contraception around the time they became pregnant; those who had ceased to use contraception; and those that had never used contraception. The method of contraception used by the majority of the first group was the condom and the main source of the method was the chemist shop. The second group had most commonly used oral contraceptives in the past and had ceased use in many cases as a result of side effects. The majority of the third group did not speak English and had limited knowledge of methods of contraception. **CONCLUSIONS:** High usage of chemists means women avoid service providers who could offer help and advice. Women were prepared to put themselves at risk of unwanted pregnancy rather than return for further help and the lack of knowledge about emergency birth control was of some concern. The needs of black and ethnic minority women requires detailed work to improve access and acceptability of contraceptive services.

JOURNAL ARTICLE

Emergency contraception: preventing unintended pregnancy.**Nurse Pract 1997 Nov;22(11):34-6, 39-40, 45-8**

Morgan KW; Deneris A

Planned Parenthood Association of Utah, Salt Lake City, USA.

Approximately 60% of all pregnancies are unintended at the time of conception, either unwanted or mistimed. Emergency contraception (i.e., use of a birth control method after intercourse has occurred) is a preventive treatment that has been underutilized. Six brands of oral contraceptives have recently been found by the U.S. Food and Drug Administration to be safe and effective as emergency contraceptive pills. These pills have been shown to reduce the likelihood of pregnancy occurring by at least 74%. Treatment with emergency contraceptive pills should be initiated within 72 hours of unprotected intercourse. Adverse effects include nausea, vomiting headache, and a change in menstrual bleeding patterns. Postcoital insertion of an intrauterine device is also highly effective as a postcoital contraceptive, but only in a select group of patients at low risk for sexually transmitted diseases. Promotion of access to emergency contraception includes educating both patients and providers about the method and making emergency contraceptive pills available to patients even before the need arises.

HISTORICAL ARTICLE

A second chance at preventing pregnancy. Using oral contraceptives for emergency contraception.

Adv Nurse Pract 1997 Nov;5(11):43-7

Davies JE
Princeton University Health Services program, N.J., USA.

JOURNAL ARTICLE

Breaking the silence on emergency contraception.

AWHONN Lifelines 1997 Dec;1(6):15-6

Trussell J

Woodrow Wilson School of Public and International Affairs, Princeton University, USA.

JOURNAL ARTICLE

Intrauterine contraceptive devices and antigestagens as emergency contraception**Eur J Contracept Reprod Health Care 1997 Dec;2(4):243-6**

Webb AM

Women's Health Directorate, Abacus, Liverpool, UK.

Although the Yuzpe regimen of emergency contraception is the one most commonly used, there are alternatives. Copper-containing intrauterine devices are very effective and can be inserted for at least 5 days after unprotected intercourse and sometimes longer. They may, however, transmit pre-existing infection into the upper genital tract and cause discomfort when being fitted. Progestogen-only emergency contraception appears, from WHO studies, to be a useful adjunct to current therapies. Mifepristone has been studied in various doses and has been shown to be very effective but is not yet commercially available. Health services should provide a full range of methods including emergency contraception by appropriately trained people in an acceptable environment.

REVIEW, TUTORIAL

Provision for sexual health care of adolescents in genitourinary medicine clinics in the United Kingdom

Genitourin Med 1997 Dec;73(6):453-6

The British Cooperative Clinical Group.

OBJECTIVES: To investigate the provision for sexual health care of adolescents in genitourinary medicine clinics in the United Kingdom. **METHODS:** A questionnaire was sent to all 170 consultants in charge of genitourinary medicine clinics in the United Kingdom. **RESULTS:** Completed questionnaires were received from 119 consultants in charge of clinics. Eleven per cent of attenders during April-June 1995 were aged under 20 years. Attenders aged under 16 years and from 16-19 years old were found to have significantly higher rates of gonorrhoea than those aged over 19. The same applied to male attenders with chlamydia. Female attenders aged 16-19 had significantly higher rates of anogenital warts than those aged over 19. Thirty six per cent of female cases of gonorrhoea occurred under the age of 20 years. In most clinics (74%) it was policy for a new clinic attender aged under 16 years to see a health adviser. Most clinics (79%) provided emergency contraception, but few (14%) had a full contraception service. Most clinics participated in STD/HIV/sexual health education in the local community, especially in schools (74%) and colleges (70%). Seventy five per cent of health authorities had medical services designated for young people, but only 18% had such services which offered screening for STDs. Only 4% of genitourinary medicine clinics held sessions which were designated for young people (upper age limit 21 years or less). **CONCLUSIONS:** Genitourinary medicine clinics in the United Kingdom provide a range of services, including extensive education in the community, to promote sexual health among adolescents. A critical evaluation of the quality of health education activity by genitourinary medicine clinics would be of interest.

JOURNAL ARTICLE

Knowledge and Attitudes about Emergency Contraception Among Health Workers in Ho Chi Minh City, Vietnam**International Family Planning Perspectives, 23:68-72, 1997**

Thi Nhu Ngoc N, Ellertson C, Surasrang Y, Thai Loc L.
Hung Vuong Hospital, Ho Chi Minh City, Vietnam

In a series of focus groups and in-depth interviews, physicians, midwives and other family planning providers in Ho Chi Minh City, Vietnam, were questioned about their knowledge and attitudes regarding use of three methods of emergency contraception - the Yuzpe regimen, a levonorgestrel-only regimen and postcoital insertion of a copper-bearing IUD. Most providers were familiar with the concept of emergency contraception and endorsed its practice, but lacked accurate and detailed information about method use. They also overestimated contraindications and potential side effects. Providers advocated for additional training for themselves and for druggists, who provide these methods over the counter. Participants generally agreed about the need for more empirical information about the safety and efficacy of these methods, but disagreed about the degree to which emergency methods should be made readily available to women in Vietnam.

JOURNAL ARTICLE

Not a 'proper' solution? The gap between professional guidelines and users' views about the safety of using emergency contraception.

J Health Serv Res Policy 1998 Jan;3(1):12-9

Ziebland S, Maxwell K

ICRF General Practice Research Group, University of Oxford, UK.

OBJECTIVES: As a form of contraception which is used after sex, emergency contraception occupies a singular place in the birth control repertoire. The relatively high UK incidence of pregnancy terminations and of teenage pregnancy, combined with the recognition that much early sex remains unplanned and unprotected, has led to calls for better access to emergency contraceptive methods. In this study a combination of self-completion questionnaires and semi-structured interviews was used to explore views of emergency contraception among women who were using the method. **METHODS:** Five hundred and ten women attending two family planning clinics in Oxford and London completed a questionnaire in the waiting room and 53 women who were attending for emergency contraception took part in semi-structured interviews. **RESULTS:** The view, presented in recently published UK guidelines, that emergency contraception is a reliable method and not dangerous to repeat, was not shared by the respondents. The rationale for and sources of women's concerns about the strength of the dose of hormonal emergency contraception and the nature of side-effects are explored.

An audit of emergency contraception: a look at patient characteristics and the effects of a consultation proforma.

Int J STD AIDS 1998 Jan;9(1):48-50

Nanthakumaran H; Sullivan AK; Boag FC

Department of Genitourinary Medicine, John Hunter Clinic, Chelsea and Westminster Hospital, London, UK.

The aim of this study was to examine the characteristics of patients requesting emergency postcoital contraception at a genitourinary medicine (GUM) clinic. We also compared the quality of information obtained during the consultation, before and after a proforma was introduced. A retrospective review of all clinical notes of patients who attended for postcoital contraception between January and December 1994 and April to June 1995 was performed. Eighty-three per cent of patients were aged 17-29 years, 68.8% were in relationship, 41.3% were not using regular contraception, 33.8% accepted a sexual health screen and of these, 14.8% had a concurrent sexually transmitted disease (STD). The introduction of a consultation proforma significantly improved certain areas of the consultation. The results suggest that sexual health screens should be encouraged in women attending GUM clinics for postcoital contraception and that the use of a proforma improves the quality of information obtained.

JOURNAL ARTICLE

Emergency contraception update

Br J Fam Plann 1998 Jan;23(4):135-7

Kubba A, Wilkinson C

Lambeth Health Care/UMDS, Department of Obstetrics and Gynaecology, London, UK.

REVIEW, TUTORIAL

Pregnancy resulting from rape.**J Obstet Gynecol Neonatal Nurs 1998 Jan-Feb;27(1):25-31**

Lathrop A

Pregnancy resulting from rape is more prevalent than generally recognized, and violations of women's sexual and reproductive self-determination take many forms. Four themes--relationship rape, power dynamics, maternal ambivalence, and social reactions and support--can be identified in one woman's experiences and the literature. Recommended interventions, based on a woman-centered empowerment framework, include safety assessment, formulating a safety plan, and facilitating social support. Emergency postcoital contraception is a preventive option.

REVIEW, TUTORIAL

Emergency postcoital contraception [letter; comment]

N Engl J Med 1998 Feb 12;338(7):476-7

Comment on: N Engl J Med 1997 Oct 9;337(15):1058-64

Potter LS; Trussell J; Rarick L

COMMENT, LETTER

Over-the-counter emergency contraception: a feasible option

Fam Pract 1998 Feb;15(1):38-43

Matheson CI; Smith BH; Flett G; Bond CM; Kennedy EJ; Michie C; Duthie I
Department of General Practice and Primary Care, University of Aberdeen, Foresterhill
Health Centre, UK.

BACKGROUND: The high number of unintended pregnancies and terminations in Britain indicates that women who could use emergency contraception do not. Knowledge of access to sources of emergency contraception is limited. Oral administration of combined oestrogen-progestogen is safe and does not require routine physical administration, and there are proposals to re-regulate this from a prescription-only medicine to a pharmacy medicine, available over the counter in community pharmacies under the supervision of a pharmacist. **OBJECTIVES:** We aimed to demonstrate that the availability of combined, oral oestrogen- progestogen under the supervision of the community pharmacist would be safe and effective. **METHOD:** Guidelines were developed by a multidisciplinary group incorporating pharmacists, GPs, a pharmacologist and a consultant in family planning. The guidelines were based on published evidence, where possible. **CONCLUSION:** Guidelines have been developed to accompany the provision of combined, oral oestrogen-progestogen which demonstrate that over-the-counter availability could be a safe and effective method of reducing the number of unwanted pregnancies in Britain.

TUTORIAL, GUIDELINES

Please help, our condom tore last night**S Afr Med J 1998 Feb;88(2):143-5**

Rutgers RA, Verkuyl DA

To identify bottlenecks in the delivery of comprehensive reproductive health care in Bulawayo, Zimbabwe's second city, a study was performed utilising volunteers pretending to be in need of emergency contraception. A total of 55 private, Zimbabwe National Family Planning Council, municipal and government health facilities were visited. These consultations resulted in 9 (16%) correct, 1 possibly correct and 15 wrong prescriptions for the morning-after pill (MAP); no treatment was prescribed in 30 instances. Public sector health personnel were very judgemental in their attitude toward sexually active teenagers. Although the Essential Drug List of Zimbabwe is quite clear about the MAP, many health providers are not aware of this, and others do not even have/use this book.

TUTORIAL

Seattle pilot project makes emergency contraception available directly from pharmacists

Am J Health Syst Pharm 1998 Mar 15;55(6):520, 523

Landis NT

NEWS

Emergency contraception.

Nurs Spectr (Wash D C) 1998 Apr 6;8(7):5-6

Van Zandt S

Planned Parenthood of Maryland, Baltimore, USA.

Impact of the October 1995 pill scare in Grampian

Br J Fam Plann 1998 Apr;24(1):18-20

Flett G, Gurney E, McKessock L, Reid J

Grampian Healthcare NHS Trust, Family Planning Service, 13 Golden Square, Aberdeen AB10 1RM, UK.

Over two years have elapsed since the Department of Health issued a press release concerning the safety of some third generation contraceptive pills. Warnings about increased abortion rates followed and recently published national figures for England and Wales have confirmed this. In Grampian we have assessed the impact of the pill scare at a subnational level, which has received much less consideration. Grampian has a stable population with an estimated 116,500 women in the reproductive years. The six month period from November 1995 until April 1996 was chosen to monitor the immediate aftermath of the pill scare. Aberdeen Royal Infirmary provides a regional, dedicated abortion service and has maintained a service specific database since 1994. This is an ideal situation to monitor trends in abortion rates in a specific population. Women attending for abortion counselling were asked to complete a questionnaire regarding their recall of media publicity. Live-births at Aberdeen Maternity Hospital from June to November 1996 were also recorded, reflecting conceptions in the study period. Prescribing patterns for combined pills and emergency contraception for Grampian general practitioners and Grampian Healthcare family planning service were also analysed. There was no increase in the abortion rate in the study period when compared with the same period in the preceding year - a total of 728 women underwent an abortion. Forty six women were identified within the 728 as having conceived as a direct consequence of the scare, but their characteristics were not dissimilar to the other women on the database. Live-birth rates were also stable. Emergency contraception prescribing was slightly increased for the family planning service but not in general practice. Both general practice and the family planning service showed an immediate and sharp fall in prescribing of third generation pills mirrored by an increase in second generation pill prescribing. For family planning particularly, prescriptions for third generation pills have shown an increase again from early 1996, although remaining below original levels. Fifty five per cent of the women who were given the questionnaire about media publicity responded. Seventy nine per cent recalled some publicity, but 17 per cent of these women could not remember any specific details. Unlike national reporting, our figures do not substantiate any increase in abortions or deliveries in the aftermath of the pill scare. The slight increase in emergency contraception prescribing by the family planning service more probably reflects local awareness campaigns rather than any appreciable switch away from regular pill use. On a population level, the scare did not have the predicted negative impact on pill users in Grampian and it would have been incorrect for us to extrapolate from national data in this instance. Failure to demonstrate numerical impact for the population does not deny the devastating effect of a termination for an individual woman. The emotional impact of the scare on women, while more difficult to measure, should not be underestimated. The influence on the next generation of women with regard to their contraceptive choice remains to be seen.

Attitudes of the Physician Membership of the Society for Adolescent Medicine Toward

Medical Abortions for Adolescents

Pediatrics 1998 May 1;101(5):e4

Miller NH; Miller DJ; Pinkston Koenigs LM

Department of Pediatrics, Baystate Medical Center, Springfield, Massachusetts.

Objective. To document the practices and attitudes of the US physician members of the Society for Adolescent Medicine (SAM) regarding adolescent abortion and contraception, as well as physician willingness to prescribe medical abortion if approved by the Food and Drug Administration (FDA). **Design.** Cross-sectional questionnaire survey. **Participants.** The entire physician membership of SAM (N = 1001) was surveyed. A total of 713 physicians responded, with 668 usable surveys yielding an adjusted response rate of 70%. **Results.** Of the respondents,

81% were trained as pediatricians; 58% had additional adolescent medicine training. Ninety-six percent prescribed contraception for their patients. Sixty-one percent of respondents identified abortion as an option for pregnant adolescents in all circumstances, whereas 4% believed abortion should never be an option. Eighty-nine percent referred their patients for abortions; 90% were aware of medications to induce abortions medically. If these medications (methotrexate and misoprostol, RU-486) were FDA-approved, 42% would prescribe them for their patients; 34% were unsure. Fifty-four percent believed if medical abortions were routinely available, they should be available from primary care physicians. Physicians were significantly more likely to consider prescribing medical abortions if the physician were female, offered postcoital contraception, performed Norplant insertions, referred adolescents for abortions, or performed postabortion medical checkups. Physicians were no more likely to consider prescribing medical abortions according to physician age, specialty training, or date of residency training. Religious affiliation per se was not associated with likelihood of prescribing medical abortions, but Catholic physicians were significantly less likely to consider prescribing medical abortions. **Conclusions.** Virtually all SAM physician respondents (96%) reported that abortion for pregnant adolescents should be available under some circumstances. Forty-two percent would prescribe medical abortion if the medications were FDA-approved, suggesting that medical abortion would potentially be available to adolescents from a larger group of physicians than is currently available.

JOURNAL ARTICLE

Emergency contraception for midwifery practice

J Nurse Midwifery 1998 May-Jun;43(3):182-9

Comment in: J Nurse Midwifery 1998 Nov-Dec;43(6):541-3

Klima CS

Yale University School of Nursing, Division of Primary Care, New Haven, Connecticut 06536, USA.

Every year in the United States, there are an estimated 3.5 million unplanned pregnancies with nearly one third of these attributed to contraceptive failures. Despite the availability of effective contraceptive methods, far too many women still experience unwanted pregnancies. It has been estimated that emergency contraception, also referred to as postcoital contraception or "the morning after pill," can reduce the risk of pregnancy after unprotected intercourse by as much as 75%. When administered within 72 hours of unprotected intercourse, emergency contraception, inhibits implantation of a fertilized ovum. The most common method of emergency contraception, the administration of ethinyl estradiol and dL-norgestrel, was initially described by Yuzpe in 1977. In the past 20 years, multiple studies have demonstrated the effectiveness of commonly prescribed combination oral contraceptives containing ethinyl estradiol and levonorgestrel. For those women in whom estrogen is contraindicated, progestin-only pills or the synthetic androgen Danazol have been used with comparable effectiveness rates. For appropriately selected women, an intrauterine device such as the Paragard T380A (Ortho Pharmaceuticals, Raritan, NJ) also may be inserted within 5-7 days after unprotected intercourse to reduce the risk of unintended pregnancy. Despite its success and safety, emergency contraception is underused by women and their health care providers. As providers of comprehensive health care, midwives should provide patients with accurate information concerning pregnancy prevention. For many women, obtaining emergency contraception is an entry into the health care system and provides them an opportunity to be educated about safer sex practices, contraception, and the importance of regular health screening. Regularly discussing emergency contraception with patients at routine health visits will enable them to participate fully in their health care decisions and diminish the physical, psychological, and societal stressors associated with unplanned pregnancy.

REVIEW, TUTORIAL

Recent advances in contraception

Aust Fam Physician 1998 May;27(5):347-52

Comment in: Aust Fam Physician 1998 Jul;27(7):578

Mazza D

Department of Obstetrics and Gynaecology, Monash University.

BACKGROUND: Advice regarding contraception, the means of fertility regulation for millions of women, is part of a general practitioner's bread and butter work. The area is however, developing at a rapid pace with the refinement of hormonal methods and the development of new and easier modes of delivery.

OBJECTIVE: This article will review the results of recent studies in the area of reproductive health that better clarify the critical issues in the prescription and use of contraceptives. It will also describe contraceptive products that will soon be available in Australia. **DISCUSSION:** General practitioners need to convey the results of this research to patients so that they may make informed contraceptive choices based on evidence. Patients should also be made aware of all of their contraceptive options as well as the availability of emergency contraceptives.

REVIEW, TUTORIAL

Emergency postcoital contraception

J Pediatr Adolesc Gynecol 1998 May;11(2):61-72

Published erratum appears in J Pediatr Adolesc Gynecol 1998 Aug;11(3):164

Chiou VM, Shrier LA, Emans SJ

Division of Adolescent/Young Adult Medicine, Children's Hospital, Boston, Massachusetts 02115, USA.

Of the estimated 3.5 million unintended pregnancies that occur each year in the United States, some 1.7 million are thought to be the result of contraceptive failure. The extremely high numbers of unintended pregnancies not only in the United States but also worldwide indicates that emergency contraception remains an important but underused method of pregnancy prevention. Emergency postcoital contraception via mechanical or pharmacological means inhibits fertilization and/or implantation from unprotected sexual intercourse. Although emergency contraception has been used primarily in victims of sexual assault, it offers a low-cost, highly effective method to reduce the incidence of unintended pregnancy. Emergency contraception decreases the costs and emotional and physical risks to women who have had unprotected intercourse. Emergency contraception also increases the latitude women have to make reproductive decisions by offering an alternative to abortion and childbearing. The heart of the problem with emergency contraception is not the failure rate or side effects of specific methods but the fact that so few women and adolescents who have had unprotected intercourse know the option exists, and their providers may be reluctant to prescribe the method.

REVIEW, TUTORIAL

Emergency contraception--cost-accounting

J Pediatr Adolesc Gynecol 1998 May;11(2):59

Sanfilippo JS

EDITORIAL

New estimates of the effectiveness of the Yuzpe regimen of emergency contraception**Contraception 1998 Jun;57(6):363-9**

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The purpose of this study was to provide new estimates of the effectiveness of the Yuzpe method of emergency contraception and to offer correctly computed estimates of the confidence intervals for estimated effectiveness rates. Through a literature search, seven studies that present the number of women treated and outcome of treatment by cycle day of unprotected intercourse relative to expected day of ovulation were identified. Probabilities of conception by cycle day of intercourse among women not using contraception and the associated variance-covariance matrix from five other datasets were estimated, and these external estimates were used to assess the effectiveness of the Yuzpe regimen. The 40 estimates of effectiveness, based on seven separate studies and the seven studies combined and five different sets of conception probabilities by cycle day, ranged from a low of 44.2% to a high of 88.7%. The preferred point estimate is that emergency contraceptive pills reduce the risk of pregnancy by 75.4%, with a 95% confidence interval extending from 65.6% to 82.4%. True effectiveness is likely to be at least 75% because treatment failures (observed pregnancies) include women who were already pregnant when treated and women who became pregnant after being treated.

JOURNAL ARTICLE

Effect of educational leaflets and questions on knowledge of contraception in women taking the combined contraceptive pill: randomised controlled trial**BMJ 1998 Jun 27;316(7149):1948-52**

Little P, Griffin S, Kelly J, Dickson N, Sadler C

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OBJECTIVE: To assess whether provision of educational leaflets or questions on contraception improves knowledge of contraception in women taking the combined contraceptive pill. **DESIGN:** Randomisation of women into three groups according to type of educational leaflet on contraceptive information. These groups were subdivided into two on the basis of questions on contraception asked by the doctor or practice nurse. The women were followed up by postal questionnaire 3 months later. **SETTING:** 15 general practices in South and West region. **SUBJECTS:** 636 women attending check up appointment for repeat prescription of the combined contraceptive pill. **MAIN OUTCOME MEASURES:** Knowledge of: factors causing pill failure, subsequent action, emergency contraception, and all the rules (pill rules) that apply to the contraceptive pill. **RESULTS:** 523 women returned completed questionnaires (response rate 82%). Knowledge of contraception with no intervention was low with only 10 (12%) women knowing all the pill rules. Educational intervention had a highly significant effect on knowledge of: factors causing pill failure (likelihood ratio $\chi^2=22$); subsequent action (21); emergency contraception (24); and all the pill rules (22) ($P < 0.01$ in all cases). Improvement in knowledge of all the pill rules occurred with provision of the summary leaflet (28% knew all the rules, adjusted odds ratio 4.04, 95% confidence interval 1.68 to 9.75), the Family Planning Association's leaflet (27%, 3.43, 1.45 to 8.09), and asking questions (26%, 3.03, 1.30 to 7.00). Asking questions in addition to provision of leaflets improved knowledge of contraception further for the summary leaflet (39%, 6.81, 2.85 to 16.27) but not for the Family Planning Association leaflet (21%, 2.58, 1.07 to 6.18).

CONCLUSION: Women attending check ups for repeat prescriptions of the contraceptive pill should be provided with educational leaflets on contraception or asked relevant questions to help improve their knowledge of contraception. Asking questions in addition to providing a summary leaflet is time consuming, but results in the most knowledge gained.

CLINICAL TRIAL, RANDOMIZED CONTROLLED TRIAL

Adolescent contraception

Curr Opin Obstet Gynecol 1998 Jun;10(3):213-9

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Adolescent pregnancy rates have declined modestly, most likely because of the increased use of condoms, especially at first intercourse. Condom distribution in schools appears to be effective in promoting condom use without increasing sexual activity. Although, to date, no contraceptive has been as effective as Norplant in reducing teen pregnancy, use of the method has declined dramatically. Depo-Provera use is increasing, but continuation rates are disappointing and the impact on teen pregnancy rates is as yet unknown. Emergency contraception remains underutilized, and interventions to improve oral contraceptive compliance are beginning to be explored. School-based programs that provide contraception without adding a strong educational component fail to improve contraceptive use or reduce pregnancy rates. Use of any contraceptive by teens is cost effective.

REVIEW, TUTORIAL

Endocrine function and emergency contraception: physiology and society**Am J Physiol 1998 Jun;274(6 Pt 2):S46-52**

Anderson M

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Relating emergency contraception, commonly referred to as "the morning-after pill," to the menstrual cycle can be used both to teach endocrine function and to show how physiology relates to the world outside the undergraduate classroom. The menstrual cycle is an excellent topic for teaching many features of the physiology of the human endocrine system. Relating emergency contraception to the menstrual cycle makes this topic relevant to both male and female students, provides opportunities for discussions that require the students' understanding of endocrine functions, and illustrates how physiology is connected to social economic, and political issues. The overview of emergency contraception and literature survey provided here are meant to be adapted for use in a variety of teaching contexts. The depth of coverage and the extent of consideration of issues beyond physiology would depend on many factors including the level of the course and the size of enrollment.

HISTORICAL, REVIEW, TUTORIAL

Contraceptive use in a rural general practice**J R Soc Med 1998 Jun;91(6):297-300**

Rowlands S

Ivel Medical Centre, Bedfordshire, UK.

All women aged 20-49 in a general practice were sent a questionnaire about their reproductive health, and 72% responded. 78% of respondents were using a method of fertility control. More than a quarter of women were obtaining their contraceptive supplies (condoms especially) from non-medical outlets. Knowledge of the existence of emergency contraception was high (83%). The general practitioner (GP) was the most popular source of contraceptive supplies for those aged under 40 years and more than four-fifths of women said that they would rather turn to their GP than to other sources for future contraceptive advice.

JOURNAL ARTICLE

The effects of self-administering emergency contraception

N Engl J Med 1998 Jul 2;339(1):1-4

Comment in: N Engl J Med 1998 Jul 2;339(1):41-2

Comment in: N Engl J Med 1998 Nov 5;339(19):1395

Glasier A, Baird D

Edinburgh Healthcare National Health Service Trust Family Planning and Well Woman Services, Department of Obstetrics and Gynaecology, University of Edinburgh, Scotland, United Kingdom.

BACKGROUND: Emergency postcoital contraception prevents pregnancy, but it must be prescribed by a doctor and taken within 72 hours of intercourse. It has been proposed that emergency contraception be made available without a prescription. We undertook a study to learn how women might behave if given a supply of emergency contraceptive pills to keep at home. **METHODS:** We assigned 553 women to be given a replaceable supply of hormonal emergency contraceptive pills to take home (the treatment group) and 530 women to use emergency contraception obtained by visiting a doctor (the control group). The frequency of use of emergency contraception, the use of other contraceptives, and the incidence of unwanted pregnancy were determined in both groups of women one year later.

RESULTS: The results for 549 women in the treatment group and 522 women in the control group were available for analysis. Three hundred seventy-nine of the women in the treatment group (69 percent) and 326 of the women in the control group (62 percent) contributed detailed information at follow-up. One hundred eighty of the women in the treatment group (47 percent) used emergency contraception at least once. Among those who returned the study questionnaire, 98 percent used emergency contraception correctly. There were no serious adverse effects. Eighty-seven women in the control group (27 percent) used emergency contraception at least once ($P < 0.001$ for the comparison with the treatment group). The women in the treatment group were not more likely to use emergency contraception repeatedly. Their use of other methods of contraception was no different from that of the women in the control group. There were 18 unintended pregnancies in the treatment group and 25 in the control group (relative risk, 0.7; 95 percent confidence interval, 0.4 to 1.2).

CONCLUSIONS: Making emergency contraception more easily obtainable does no harm and may reduce the rate of unwanted pregnancies.

CLINICAL TRIAL, CONTROLLED CLINICAL TRIAL

Self-administered emergency contraception--a second chance

N Engl J Med 1998 Jul 2;339(1):41-2

Comment on: N Engl J Med 1997 Oct 9;337(15):1058-64

Comment on: N Engl J Med 1998 Jul 2;339(1):1-4

Stubblefield P

COMMENT, EDITORIAL

Promoting emergency contraception**Hosp Pract (Off Ed) 1998 Aug 15;33(8):61-3, 67-9, 73-5**

Comment in: Hosp Pract (Off Ed) 1998 Oct 15;33(10):26

Stewart F

Henry J. Kaiser Family Foundation, Menlo Park, Calif., USA.

The use of available oral contraceptive agents for emergency contraception has been judged safe and effective by the U. S. Food and Drug Administration and other agencies. Yet implementation by physicians has been limited, and only a small percentage of women take advantage of this option each year. Lack of a specially packaged--and marketed--product for this indication has been a major barrier.

NEWS, TUTORIAL

Randomised controlled trial of levonorgestrel versus the Yuzpe regimen of combined oral contraceptives for emergency contraception

Lancet 1998 Aug 8;352(9126):428-33

Comment in: Lancet 1998 Aug 8;352(9126):416-7

Comment in: Lancet 1998 Oct 10;352(9135):1222-3

Comment in: Lancet 1998 Oct 10;352(9135):1223

Comment in: Lancet 1998 Oct 31;352(9138):1477

Comment in: Lancet 1998 Dec 12;352(9144):1939

Comment in: Lancet 1998 Dec 12;352(9144):1939-40

WHO Task Force on Postovulatory Methods of Fertility Regulation.

BACKGROUND: A previous randomised study suggested that the progestagen, levonorgestrel, given alone in two separate doses each of 0.75 mg caused nausea and vomiting in fewer women and might be more effective than the Yuzpe regimen of combined oral contraceptives for emergency contraception, although the difference was not significant. We compared these two regimens when started within 72 h of unprotected coitus. **METHODS:** We enrolled in the double-blind, randomised trial 1998 women at 21 centres worldwide. Women with regular menses, not using hormonal contraception, and requesting emergency contraception after one unprotected coitus, received levonorgestrel (0.75 mg, repeated 12 h later) or the Yuzpe regimen (ethinylloestradiol 100 microg plus levonorgestrel 0.5 mg, repeated 12 h later). **FINDINGS:** Outcome was unknown for 43 women (25 assigned levonorgestrel, 18 assigned Yuzpe regimen). Among the remaining 1955 women, the crude pregnancy rate was 1.1% (11/976) in the levonorgestrel group compared with 3.2% (31/979) in the Yuzpe regimen group. The crude relative risk of pregnancy for levonorgestrel compared with the Yuzpe regimen was 0.36 (95% CI 0.18-0.70). The proportion of pregnancies prevented (compared with the expected number without treatment) was 85% (74-93) with the levonorgestrel regimen and 57% (39-71) with the Yuzpe regimen. Nausea (23.1 vs 50.5%) and vomiting (5.6 vs 18.8%) were significantly less frequent with the levonorgestrel regimen than with the Yuzpe regimen ($p < 0.01$). The efficacy of both treatments declined with increasing time since unprotected coitus ($p = 0.01$). **INTERPRETATION:** The levonorgestrel regimen was better tolerated and more effective than the current standard in hormonal emergency contraception. With either regimen, the earlier the treatment is given, the more effective it seems to be. Publication

CLINICAL TRIAL, RANDOMIZED CONTROLLED TRIAL, MULTICENTER STUDY

Time for emergency contraception with levonorgestrel alone

Lancet 1998 Aug 8;352(9126):416-7

Published erratum appears in Lancet 1998 Aug 22;352(9128):658

Comment on: Lancet 1998 Aug 8;352(9126):428-33

Comment in: Lancet 1998 Oct 10;352(9135):1223

Comment in: Lancet 1998 Oct 31;352(9138):1477

Guillebaud J

Department of Gynaecology, University College London, Margaret Pyke Centre, UK.

COMMENT

Missed opportunities: teenagers and emergency contraception**Arch Pediatr Adolesc Med 1998 Aug;152(8):727-33**

Comment in: Arch Pediatr Adolesc Med 1998 Aug;152(8):725-6

Delbanco SF, Parker ML, McIntosh M, Kannel S, Hoff T, Stewart FH
The Henry J. Kaiser Family Foundation, Menlo Park, Calif 94025, USA.

OBJECTIVE: To determine American teenagers' awareness of and knowledge about emergency contraceptive pills and their likelihood to use them. **METHODS:** We conducted a nationally representative telephone survey between March 28, 1996, and May 5, 1996, of 1510 teenagers (757 girls and 753 boys), aged 12 to 18 years, living in the continental United States in households with telephones. The sample overrepresented African American, Latino, and low-income teenagers. The error attributable to sampling and other random effects for the total sample is +/-3 percentage points at the 95% confidence level. **RESULTS:** Of the 1510 teenagers, only about one quarter (23%) were aware that "anything" could be done after unprotected sex to prevent pregnancy. Slightly more (28%) had heard of "morning-after pills" or emergency contraceptive pills. Of the 423 teenagers who had heard of emergency contraceptive pills, one third (32%) did not know that a prescription is necessary to obtain them, and three quarters (78%) underestimated how long after unprotected intercourse the emergency contraceptive pill regimen could be initiated. Only 9% knew that emergency contraceptive pills are effective as long as 72 hours after unprotected sex. After being told about the option of emergency contraceptive pills, two thirds (67%) of teenaged girls said that they would be likely to use emergency contraceptive pills. Among the 66% of teenaged girls who had not previously heard of emergency contraceptive pills, 64% said that they would be likely to use them. **CONCLUSIONS:** Emergency contraceptive pills have great potential as a tool for reducing unplanned pregnancies among teenaged girls in the United States. Few teenaged girls were aware that this option exists. Once informed, teenaged girls reported being very interested in taking emergency contraceptive pills if needed.

JOURNAL ARTICLE

Preventing teen pregnancy with emergency contraception: an opportunity we should not be missing

Arch Pediatr Adolesc Med 1998 Aug;152(8):725-6

Comment on: Arch Pediatr Adolesc Med 1998 Aug;152(8):727-33

Ford C

COMMENT

The use of reproductive health services by young women in Australia**Aust N Z J Obstet Gynaecol 1998 Aug;38(3):336-8**

Mirza T, Kovacs GT, McDonald P

Family Planning Australia, Monash Medical School, Melbourne.

Retrospective analysis of clinical data from 8 State/Territory Family Planning Organizations (FPO) was conducted to determine the reproductive health services used by young women. Between July, 1996 and June, 1997, a total of 185, 879 client visits were recorded at FPO clinics, of which 72,303 (39%) were by young clients. The results showed that young women tended to use a combined oral pill, postcoital pill and spermicides more than those older than 25 years ($p < 0.05$). Young women were also more likely to use services for management of sexually transmitted disease (STD), counselling for HIV, STD and sexual assault ($p < 0.05$). However, there were considerable differences among the 3 groups of women: Aboriginal clients, those who did not speak English at home, and those who were born outside Australia. This study confirms that young women are using FPO services especially for emergency/postcoital contraception, STD screening and counselling. FPOs need to continue their existing role of providing reproductive and sexual health services catering to the need of this special segment of the population.

JOURNAL ARTICLE

Increasing the effectiveness of contraceptive usage in university students

Eur J Contracept Reprod Health Care 1998 Sep;3(3):124-8

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Prevention of pregnancy requires correct and consistent use of an effective method of contraception and knowledge alone is not sufficient to ensure such use, as many complex social and behavioral factors influence contraceptive behavior. Women are particularly likely to change their contraceptive method after a contraceptive 'shock'. In this study, the change in contraceptive behavior of a group of university students who presented for emergency contraception is studied. Each student participated in a single individualized educational session. A total of 465 women requested emergency contraception in a 3.5-year period at a large student health center. Of these, 24% had not previously used contraception, 50% had previously used condoms and 25% had taken the pill (COC). Of those who usually used condoms, 79% had had a condom accident and 21% had not used them at the last intercourse. Only 30% of COC users had had a problem with the pill and the remaining 70% were not taking it at the time of last intercourse, for social rather than medical reasons. Follow-up is available for 309 (66.5%). Paired-sample analysis of these women shows a decrease in the number using no contraception (22% to 8%), and an increase in the number using COCs (33% to 66%). These changes reached statistical significance ($p < 0.0001$). University students, despite their intelligence, exhibit a high degree of risk-taking behavior but become more effective contraceptive users after an interactive counselling session following a contraceptive scare.

JOURNAL ARTICLE

Emergency contraception approved in the US

BMJ 1998 Sep 12;317(7160):697

Rutter T

NEWS

Emergency unit care of sexually transmitted infections

Int J STD AIDS 1998 Sep;9(9):543-4

Jarvis RR, Jebakumar S, Bhattacharyya MN, Mackway-Jones K
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The aim of the study was to assess provisions for management of sexually transmitted infections (STIs), emergency contraception and pregnancy test in UK emergency departments. Postal questionnaires were sent to all consultant-led emergency departments in the UK in January 1996. The response rate was 64%. Most departments made direct referrals to genitourinary medicine (GUM) clinics and most had access to appropriate clinics. While 55% had facilities for diagnosis of at least one of the 3 common STIs (Chlamydia trachomatis, Neisseria gonorrhoeae and herpes simplex), only 6.25% had facilities for all 3. A minority of units provided training in the management of STIs. Emergency physicians should be trained in the early management of STIs and a coordinated working relationship should be developed between emergency and GUM departments to provide optimal sexual health care.

TUTORIAL

Contraceptive knowledge: development of a valid measure and survey of pill users and general practitioners

Br J Fam Plann 1998 Oct;24(3):98-100

Little P, Glew C, Kelly J, Griffin S, Dickson N, Sadler C
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Aldermoor Close, Southampton SO16 5ST, UK.

AIMS: To design, pilot, and validate a questionnaire to test contraceptive knowledge in combined oral contraceptive pill users. **METHOD:** To ensure face and content validity the questionnaire was developed using existing unvalidated instruments and in consultation with GPs, local and national family planning experts, and with pill users. The questionnaire was then piloted with 15 current oral contraceptive pill users and 10 local GPs, modified, and a contraceptive knowledge 'score' developed. Construct validity-that the degree of family planning training should predict contraceptive knowledge-was tested in four groups: family planning trainers (n=28), GPs (n=40), current pill users (n=53), and male medical students (n=59). Thirty current pill users were sent the questionnaire after two weeks to determine test-retest reliability.

RESULTS: The questionnaire showed construct validity: there was a gradient of scores across the four knowledge groups. Family planning trainers had the highest scores, followed by GPs, and current pill users, with male medical students having the lowest scores (Kruskal-Wallis test $p < 0.001$). Women had good knowledge of situations when pill efficacy is reduced but poorer knowledge of what action to take subsequently. Predictors of knowledge in pill users were educational level, age, and the importance attached to not falling pregnant-thus providing further evidence for the construct validity of the questionnaire. Test-retest reliability was good (rank correlation 0.73).

CONCLUSION: A contraceptive knowledge questionnaire suitable for use in audit or research has been developed which is reliable and has face, content and construct validity. Pill users have poor knowledge of what to do in situations of pill failure and about the details of emergency contraception. Trials are needed to assess the effectiveness of different strategies to improve contraceptive knowledge in women.

JOURNAL ARTICLE

Towards a change in status of emergency contraception?

Br J Fam Plann 1998 Oct;24(3):93

Cayley J

EDITORIAL

Concerns and cautions about prescribing and deregulating emergency contraception: a qualitative study of GPs using telephone interviews

Fam Pract 1998 Oct;15(5):449-56

Ziebland S, Graham A, McPherson A

University Department of Public Health and Primary Care, Institute of Health Sciences, Oxford, UK.

OBJECTIVES: We aimed to describe GPs' responses to a clinical scenario of a request for a repeat prescription for hormonal emergency contraception (EC), their views about over-the-counter availability and beliefs about absolute contraindications. **DESIGN:** We conducted semi-structured tape-recorded telephone interviews with 76 GPs randomly selected from the medical registers of three health authorities which were chosen for high, medium and low prescribing rates for EC. **RESULTS:** There was a wide variation in the number of times that GPs would be happy to prescribe EC to the same woman in a year. The content of the consultations appeared patchy. While 59 (77.6%) of the GPs said that they would discuss future contraception with the woman, only 16 (21.1%) said they would talk about possible side effects and 28 (36.3%) would discuss the timing of the next menstrual period and the possibility of method failure. Fifty-two of the practices had a family-planning-trained practice nurse, yet only four (7.7%) had arrangements whereby the nurse could provide EC. Unqualified enthusiasm for deregulation was rare. Concerns included that women would lose out on the benefits of the consultation; worries about the safety of the method; that some women might 'abuse' it by using it frequently; and that certain characteristics of the pharmacy might make it an unsuitable setting for provision of EC.

CONCLUSIONS: This qualitative telephone survey revealed concerns about repeated use of EC and caution about the prospects of deregulation. Respondents were worried that pharmacists might not be able to address all of the features of the consultation that may be valued, yet in this sample nor do most GPs. Family-planning-trained practice nurses are an under-utilized resource and could act as a halfway house between provision by GPs and deregulation.

JOURNAL ARTICLE

[Pulmonary embolism in patients using estrogen-progestagen contraceptives] (IN FRENCH) French]

Presse Med 1998 Oct 17;27(31):1566-9

Lauque D, Mazieres J, Rouzaud P, Sie P, Chamontin B, Carrie D, Hermant C, Tubery M, Carles P

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OBJECTIVES: The risk of thromboembolism in patients taking estrogen-progestagen oral contraceptive drugs has apparently increased since the introduction of third-generation progestagens (desogestrel, gestodene). We examined the clinical features, risk factors and outcome of pulmonary embolism in this context. **PATIENTS AND METHODS:** We reviewed 11 cases of thromboembolism in patients on oral contraception and hospitalized in emergency situations in 1995 and 1996 for pulmonary embolism in order to determine the gravity of the thromboembolic event, risk factors and type of drug used. **RESULTS:** Early clinical signs had preceded the onset of embolism by 2 to 164 days. PaO₂ was below 70 mmHg in 4 patients. Diagnosis was achieved with pulmonary scintigraphy (11 cases), spiral CT (3 cases) and angiopneumography (2 cases). Duplex Doppler visualized the phlebitis in 7 patients. Given heparin (with fibrinolysis in 3 cases) then anti-vitamin K, and after withdrawal of the oral contraceptive, outcome was favorable in all cases. There were no recurrences. The nature of the oral contraceptive varied. Five patients were taking third-generation progestagens. In two cases, embolism had occurred following a change from a second-generation to a third-generation progestagen. Family history of phlebitis and/or abnormal laboratory findings were observed in 6 patients: resistance to activated protein C (2 patients), protein C deficiency (2 patients), anticardiolipin (2 patients) and low-titre antinuclear antibodies (2 patients). **CONCLUSION:** Pulmonary embolism in patients on oral contraceptives persists despite changes in the hormone content of the drugs. Diagnosis is often delayed. Family history of thrombosis or biological risk factors are often found.

JOURNAL ARTICLE

An emergency contraceptive kit

Med Lett Drugs Ther 1998 Oct 23;40(1038):102-3

CLINICAL TRIAL

Emergency contraception**Lancet 1998 Oct 31;352(9138):1477**

Comment on: Lancet 1998 Aug 8;352(9126):416-7

Comment on: Lancet 1998 Aug 8;352(9126):428-33

Comment in: Lancet 1998 Dec 12;352(9144):1939

Ellertson C, Blanchard K, Webb A, Bigrigg A, Haskell S

COMMENT

Emergency contraception

Hosp Pract (Off Ed) 1998 Oct 15;33(10):26

Comment on: Hosp Pract (Off Ed) 1998 Aug 15;33(8):61-3, 67-9, 73-5

Klein J

COMMENT, LETTER

Self-administering emergency hormonal contraception

J Fam Pract 1998 Oct;47(4):252

McMullen JP, Schooff M

Clarkson Family Medicine Program, Omaha, Nebraska, USA.

Emergency postcoital contraception could prevent 1.7 million unintended pregnancies and 0.8 million abortions in the United States each year. Emergency hormonal contraception (EHC) is safe and effective (approximately 3% failure rate). Although EHC is not licensed in the United States, some brands of combined oral contraceptives can be used as an alternative for this indication. Many doctors and their patients fear that access to EHC will encourage promiscuity and unsafe sexual practices while discouraging the use of more reliable contraceptive methods. Study participants included 1083 women who were recruited after using either EHC or having therapeutic abortion at a family planning clinic or a large hospital in Edinburgh, Scotland. Participant's ages ranged from 16 to 44 years. More than half of the participants were 20 to 29 years old and were at least 17 to 18 years old when full-time education ended. This was a 2-year prospective randomized trial. Women in the treatment group received one pack of EHC pills (four tablets, each containing 50 mg ethinyl estradiol and 0.25 mg levonorgestrel) with instructions for use on enrollment. They were instructed to follow up in writing and in person if they used the EHC; future contraception was then discussed and a replacement pill pack was given. Women in the control group were informed that EHC was available with a doctor's prescription, and that it was safe to use more than once. Both groups were sent a questionnaire after 1 year, with follow-up questionnaires as needed for nonrespondents. If no questionnaire was returned, the investigators contacted patients' family doctors and used databases from the Scottish Health Department to determine obstetric outcomes. The study population was selected to include women who had had at least one unintended pregnancy and who were being seen for contraceptive care. This represents a selection bias for women who had experienced the results of ineffective contraception, who were being seen for reproductive health issues, and who were presumably interested in responsible contraception. The study participants, therefore, may be more aware of contraceptive choices and outcomes than the general population. No analysis was performed to account for the statistical effects of women who dropped out of the study or were lost to follow-up. The primary outcome was the incidence of unwanted pregnancy after 1 year in the study. The frequency of use of EHC, the use of other forms of contraception, and the rate of therapeutic abortion were also analyzed. Data for 1071 women (549 in the treatment group and 522 in the control group) were available for analysis. None of the women who were withdrawn had used EHC prior to leaving the study. The treatment and control groups were similar in age and education. Women in the treatment group were more likely to return the final questionnaire, and those returning the questionnaire were more likely to be older and to have been recruited after a prior use of EHC than after an abortion. There was no statistical difference between groups in types of nonemergent contraception used. Women in the treatment group were more likely to use EHC (47% vs. 27%) but not more likely to use it more than once (12% vs 13%, $P = .77$). A total of 89% of women in the treatment group reported that their use of other methods of contraception was unaffected; 2% said they took more risks. There was no statistically significant difference between groups in rates of total pregnancies, miscarriages, or abortions. Although not statistically significant, there were 18 unintended pregnancies in the treatment group and 25 in the control group.

Emergency contraception: WHO Task Force study

Lancet 1998 Oct 10;352(9135):1223

Comment on: Lancet 1998 Aug 8;352(9126):416-7

Comment on: Lancet 1998 Aug 8;352(9126):428-33

Albertazzi P

COMMENT, LETTER

Emergency contraception: WHO Task Force study

Lancet 1998 Oct 10;352(9135):1222-3

Comment on: Lancet 1998 Aug 8;352(9126):428-33

Comment in: Lancet 1998 Dec 12;352(9144):1939

Trussell J

COMMENT, LETTER

The effects of self-administering emergency contraception

N Engl J Med 1998 Nov 5;339(19):1395

Comment on: N Engl J Med 1998 Jul 2;339(1):1-4

Gardner JS, Fuller TS, Hutchings J

COMMENT, LETTER

The decline in US teen pregnancy rates, 1990-1995

Pediatrics 1998 Nov;102(5):1141-7

Comment in: *Pediatrics* 1998 Nov;102(5):1205-7

Kaufmann RB, Spitz AM, Strauss LT, Morris L, Santelli JS, Koonin LM, Marks JS
Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Atlanta, Georgia, USA.

OBJECTIVES: Estimate pregnancy, abortion, and birth rates for 1990 to 1995 for all teens, sexually experienced teens, and sexually active teens. **DESIGN:** Retrospective analysis of national data on pregnancies, abortions, and births. **Participants.** US women aged 15 to 19 years. **OUTCOME MEASURES:** Annual pregnancy, abortion, and birth rates for 1990 to 1995 for women aged 15 to 19 years, with and without adjustments for sexual experience (ever had intercourse), and sexual activity (had intercourse within last 3 months). **RESULTS:** Approximately 40% of women aged 15 to 19 years were sexually active in 1995. Teen pregnancy rates were constant from 1990 to 1991. From 1991 to 1995, the annual pregnancy rate for women aged 15 to 19 years decreased by 13% to 83.6 per 1000. The percentage of teen pregnancies that ended in induced abortions decreased yearly; thus, the abortion rate decreased more than the birth rate (21% vs 9%). From 1988 to 1995, the proportion of sexually experienced teens decreased nonsignificantly. **CONCLUSIONS:** After a 9% rise from 1985 to 1990, teen pregnancy rates reached a turning point in 1991 and are now declining. Physicians should counsel their adolescent patients about responsible sexual behavior, including abstinence and proper use of regular and emergency contraception.

JOURNAL ARTICLE

Emergency contraception

J Nurse Midwifery 1998 Nov-Dec;43(6):541-3

Comment on: J Nurse Midwifery 1998 May-Jun;43(3):182-9

Baker MA

COMMENT, LETTER

Unintended pregnancy. Consequences and solutions for a worldwide problem

J Nurse Midwifery 1998 Nov-Dec;43(6):483-91

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Unintended pregnancy is a worldwide problem that affects women, their families, and society. Unintended pregnancy can result from contraceptive failure, non-use of contraceptive services, and, less commonly, rape. Abortion is a frequent consequence of unintended pregnancy and, in the developing world, can result in serious, long-term negative health effects including infertility and maternal death. In many developing countries, poverty, malnutrition, and lack of sanitation and education contribute to serious health consequences for women and their families experiencing an unintended pregnancy. Regardless of the cause, unintended pregnancy and its negative consequences can be prevented by access to contraceptive services including emergency contraception, safe and legal abortion services, and a society that allows women to determine their own reproductive choices. Addressing unintended pregnancy and its substantial human and dollar costs should be a priority in every country. The availability of reliable contraception for all, regardless of age or ability to pay, is an essential first step. Women and adolescents require access to age-appropriate and culturally sensitive reproductive health care services, including emergency contraception. Access to safe, legal abortion services is necessary to impact the staggering maternal mortality rates worldwide. Midwives throughout the world provide the majority of care for women of reproductive age. It is essential to identify those at risk for unintended pregnancy, provide the services they require, and remain diligent to ensure that those women and their families have safe options to consider when faced with an unintended pregnancy. In 1920, Margaret Sanger said, "No woman can call herself free who does not control her own body." Although great strides have been made to improve the health and status of women since Ms. Sanger spoke those words, there remains much work to be done.

REVIEW, TUTORIAL

Emergency contraception approved

Harv Womens Health Watch 1998 Nov;6(3):7

NEWS

Using pharmacies in Washington state to expand access to emergency contraception

Fam Plann Perspect 1998 Nov-Dec;30(6):288-90

Wells ES, Hutchings J, Gardner JS, Winkler JL, Fuller TS, Downing D, Shafer R
Program for Appropriate Technology in Health (PATH), Seattle, WA, USA.

JOURNAL ARTICLE

Emergency contraception use and the evaluation of barrier contraceptives. New challenges for study design, implementation, and analysis

Contraception 1998 Dec;58(6):379-86

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The availability of emergency contraception (EC) introduces new complexities to barrier contraceptive evaluation. Researchers must determine whether the primary objective of interest is to measure the effectiveness of the barrier plus EC back-up or the effectiveness of the barrier alone. Barrier contraceptive effectiveness study protocols must specify what study volunteers will be told about EC, under what conditions EC will be dispensed, what information about EC use will be collected, and how EC use will be addressed during data analysis.

REVIEW, TUTORIAL

Emergency contraception: the user profile**Adv Contracept 1998 Dec;14(4):171-8**

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Department of Obstetrics and Gynaecology, Uppsala University, Sweden.

Emergency contraception (EC) has recently become available, accepted and widely used in Sweden but little is known about the characteristics and background factors of women requesting EC. **METHODS:** During a four-month period, consecutive women (n = 762) visiting family planning clinics to request emergency contraception filled out a questionnaire about their current need for EC. **RESULTS:** The user of emergency contraception was typically a nulligravid young woman (83%) but 13% had a previous history of at least one induced abortion and 41% had given birth in the past. One out of four had used EC before, and of these 20% more than once. Condom breakage was the major reason for the current need for EC but as many as 37% had not discussed the need for contraception prior to intercourse. Friends were the most important source of knowledge about EC. **CONCLUSION:** Women requesting emergency contraception could be anyone and emergency contraception is used to compensate for contraceptive failure in order to prevent unwanted pregnancies.

JOURNAL ARTICLE

Preliminary analysis of a multicenter clinical trial using Multiload Cu 375SL for emergency contraception

Adv Contracept 1998 Dec;14(4):161-70

Liyang Z, Bilian X

National Research Institute for Family Planning, Beijing, China.

OBJECTIVE: To evaluate the efficacy, side-effects and acceptability of the Multiload Cu 375SL (MLCu 375SL IUD) used as emergency contraception (EC). **METHOD:** Women who requested EC had a MLCu 375SL IUD inserted within 5 days after unprotected intercourse. **RESULTS:** Data from 515 subjects who completed the follow-up visits were analyzed. The majority were parous women (428, 83.1%). Most of the nulliparous women, 70 out of 87 (80.5%), had had a previous abortion. The efficacy rate was 92.40%. Two pregnancies were detected at the follow-up visits. One of them was considered to be a user failure. There were no failures in insertion procedure or no pelvic infections in either group. The common complaints were pain and bleeding. The removal rate in the nulliparous group (14.9%) was significantly higher than in the parous group (3.5%). **CONCLUSIONS:** Insertion of a MLCu 375SL IUD within 5 days after unprotected intercourse provides an alternative emergency contraceptive method. It is more acceptable to parous women who plan to continue practicing contraception. It is important to provide careful counselling to clients and to emphasize that the insertion of the IUD must be within 5 days after unprotected intercourse in order to reduce the potential risk of pregnancy.

CLINICAL TRIAL

Combined oral contraceptives versus levonorgestrel for emergency contraception

J Fam Pract 1998 Dec;47(6):417

Strayer SM, Couchenour RL
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CLINICAL TRIAL

Emergency contraception with levonorgestrel or the Yuzpe regimen

Lancet 1998 Dec 12;352(9144):1939-40

Comment on: Lancet 1998 Aug 8;352(9126):428-33

Kubba A

COMMENT, LETTER

Emergency contraception with levonorgestrel or the Yuzpe regimen: Task Force on Postovulatory Methods of Fertility Regulation

Lancet 1998 Dec 12;352(9144):1939

Comment on: Lancet 1998 Aug 8;352(9126):428-33

Comment on: Lancet 1998 Oct 10;352(9135):1222-3

Comment on: Lancet 1998 Oct 31;352(9138):1477

von Hertzen H, Piaggio G, Van Look PF

COMMENT, LETTER

Moral, ethical and professional issues in prescribing emergency contraception.**Emerg Nurse 1998 Dec-1999 Jan;6(8):28-32**

McDonald H
Glasgow Royal Infirmary A&E Department.

Hugh McDonald is an emergency nurse practitioner with the authority to manage a defined group of patients who present to A&E with a specific range of complaints and injuries. Investigation, diagnosis and treatment are carried out independently and include documentation and prescription of specific drugs.

REVIEW, TUTORIAL

Emergency contraception among refugees and the displaced

J Am Med Womens Assoc 1998;53(5 Suppl 2):266-70

Goodyear L, McGinn T

Joseph L. Mailman School of Public Health at Columbia University.

In 1994, the international relief community began to recognize and address the reproductive health needs of refugees and displaced populations. A minimum initial service package of reproductive health services for refugees and the displaced, which includes emergency contraception (EC), was developed and recommended for use in refugee settings. This paper describes the experience of one international relief organization, the International Rescue Committee (IRC), in introducing EC into its worldwide reproductive health program. A recent IRC survey found that EC is available in 4 out of 14 settings where it provides reproductive health services. A case study from Tanzania demonstrates the modes of delivery, the demand for EC by women who have experienced sexual violence, and the community responses to this method of contraception. More information, education, and communication directed at refugee communities; more donor support for supplies; and institutional commitment to train staff are needed to expand refugee access to EC.

TUTORIAL

Inner-city adolescents' awareness of emergency contraception**J Am Med Womens Assoc 1998;53(5 Suppl 2):258-61**

Cohall AT, Dickerson D, Vaughan R, Cohall R
Division of Adolescent Medicine, St. Luke's-Roosevelt Hospital Center, USA.

OBJECTIVES: To assess the awareness of emergency contraception (EC) among inner-city adolescents attending a general primary health care clinic. **METHOD:** 197 patients filled out an anonymous 28-item survey on sexual activity, experience with contraceptives, attitude toward pregnancy, experience with pregnancy, awareness of and intent to use EC. **RESULTS:** 71% of the sample was sexually experienced; 90% had been active within six months of the clinic visit. While 81% of the sexually experienced segment of the sample had ever used contraceptives, 53% reported having had sex at least once during the past six months without using contraception. Fifty-seven percent "worried" following unprotected intercourse about a potential pregnancy; 32% of the sample had been involved in a pregnancy. Only 30% of the sexually experienced had heard of EC, but more than 87% stated they would use it if the need arose in the future.

CONCLUSIONS: Urban adolescents are at high risk for unintended pregnancy due to inconsistent contraceptive use and/or method failure. Level of awareness of EC was low in our sample, particularly as compared to adult women in the United States, and to women of all ages (including teenagers) in European countries. Intent to use EC was high, however, indicating a strong desire to avoid unintended pregnancy. Attention should be focused on increasing both adolescent awareness of and access to EC.

JOURNAL ARTICLE

The impact of patient experience on practice: the acceptability of emergency contraceptive pills in inner-city clinics

J Am Med Womens Assoc 1998;53(5 Suppl 2):255-7, 265

Breitbart V, Castle MA, Walsh K, Casanova C
Clinical Services at Planned Parenthood of New York City, USA.

OBJECTIVES: This article reports on a study of 119 women who sought and used emergency contraceptive pills (ECPs) at Planned Parenthood of New York City (PPNYC) clinics between June 1996 and May 1997. It focuses on their satisfaction with the method, their attitudes toward ECPs, their reactions to the service, and the impact their perceptions had on changing the provision of care. **METHOD:** The PPNYC clinical protocol employed the Yuzpe method and fairly conservative procedures, including restrictive screening, a pelvic examination for all new patients, and limited appointment slots. A two-part survey captured information on patient experience with ECPs. **RESULTS:** The largest group of respondents (40%) found out about ECPs from friends. Almost 90% of the women were using contraception before their visit to the clinic. Sixty-eight percent reported that they sought ECPs because the condom failed. In the follow-up, a majority (57%) reported that they intended to change or had changed their method of contraception--more than three-quarters to a hormonal contraceptive. While generally satisfied with the service, many respondents were cautious of more extensive distribution of ECPs.

CONCLUSION: The survey results had a profound impact on services: PPNYC revised the ECP protocol, developed a staff training package, expanded its service, and planned a multidimensional public media campaign. Further research, including a closer examination of participants' cautious attitude toward unrestricted distribution of ECPs, will be needed as PPNYC expands access to ECP.

JOURNAL ARTICLE

Emergency contraception: preliminary report of a demonstration and evaluation project**J Am Med Womens Assoc 1998;53(5 Suppl 2):251-4**

Petitti DB, Harvey SM, Preskill D, Beckman LJ, Postlethwaite D, Switzky H, Sherman C
Southern California Kaiser Permanente, USA.

Kaiser Permanente Southern California and the Pacific Institute for Women's Health began a demonstration and evaluation project on emergency contraceptive pills (ECPs) in the summer of 1996 with the goal of evaluating the feasibility and acceptability of ECPs in a large health maintenance organization and developing institutional templates, provider training and patient education materials that could be used to replicate the project. The ECP program had six components: repackaging of oral contraceptives in an ECP "kit," development of provider education materials, development of patient education materials, in-service training, making ECPs kits available in convenient locations, and development of materials to support replication of the project inside and outside Kaiser Permanente. Although data are still being analyzed, preliminary results are promising. The success of the project within this relatively conservative, but well-established medical care organization provides a model for others. The development of a standard set of educational materials and approaches to implementation should facilitate dispensing ECPs in other settings.

TUTORIAL

Call 1-888-NOT-2-LATE: promoting emergency contraception in the United States**J Am Med Womens Assoc 1998;53(5 Suppl 2):247-50**

Trussell J, Bull J, Koenig J, Bass M, Allina A, Gamble VN
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In 1997, the nonprofit Reproductive Health Technologies Project and the Office of Population Research at Princeton University, together with the communications firm Elgin DDB, planned and executed a mass media campaign to advertise the Emergency Contraception Hotline and more generally to further awareness of emergency contraception as a last chance means of pregnancy prevention in the United State. We produced a variety of public service announcements (PSAs) including television and radio spots in English and Spanish and several print versions adaptable for newspapers and magazines as well as outdoor settings such as billboards, transit shelters, and the sides of buses. Working with local coalitions, we succeeded in placing the PSAs free of charge in six pilot cities. We also generated coverage about the campaign in local and national news outlets. We chronicle the development of the media campaign, discuss the challenges and obstacles faced, and conclude with a review of the principal lessons learned.

TUTORIAL

Are we making progress with emergency contraception? Recent findings on American adults and health professionals

J Am Med Womens Assoc 1998;53(5 Suppl 2):242-6

Delbanco SF, Stewart FH, Koenig JD, Parker ML, Hoff T, McIntosh M
Henry J. Kaiser Family Foundation, Menlo Park, California, USA.

OBJECTIVES: To determine how awareness of and practices and attitudes toward emergency contraceptive pills (ECPs) have progressed among the American public and US health professionals. **METHODS:** In 1997, we conducted two nationally representative telephone surveys of Americans and health professionals of their knowledge, attitudes, and practices on ECPs and compared the findings to previous surveys. **RESULTS:** 66% of women and 51% of men 18 to 44 years old had heard of ECPs, up from 61% of women and 45% of men the same age in 1994. Only 1% of women surveyed reported having ever used this method, reflecting no change from 1994. Only 11% of women knew enough about ECPs to be able to use them. Americans named media as the primary source of information about ECPs. The proportion of physicians who had prescribed ECPs at least once in the preceding year increased significantly in 1997: 85% of obstetrician/gynecologists and 50% of family physicians compared to 69% and 34% in 1995. Almost all health professionals considered ECPs to be safe (99%) and effective (100%), yet relatively few discussed this option with their patients, and even fewer commonly prescribed it. **CONCLUSION:** Ongoing efforts are needed to improve awareness among the general public and to encourage health professionals to discuss and offer ECPs more widely.

JOURNAL ARTICLE

Improving women's access to emergency contraception: innovative information and service delivery strategies

J Am Med Womens Assoc 1998;53(5 Suppl 2):238-41

Blanchard K

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Barriers to widespread use of emergency contraception (EC) include lack of knowledge on the part of women and providers, lack of support for the method from providers, and lack of a dedicated product in many countries. This article reviews strategies to improve women's access to EC launched by national or regional health authorities, clinicians, grass-roots health organizations, and women's groups. Information campaigns have targeted women to improve their knowledge of EC and providers to improve their comfort with it. Local groups and individual providers have also provided leaflets or designed innovative service strategies in order to improve women's access to the method. Expanding the scope or number of these programs and introducing them in areas where women do not currently have adequate knowledge of or access to EC will insure that more women will be able to use this method.

REVIEW, TUTORIAL

Emergency contraceptive pills: what does the law say about prescribing, dispensing, repackaging, and advertising?

J Am Med Womens Assoc 1998;53(5 Suppl 2):233-7

Jones BS

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Despite the proven safety and efficacy of providing concentrated doses of oral contraceptive pills as postcoital contraception, many physicians and health care providers are unclear as to this "off-label" use and thus remain reluctant to dispense it. It is critical that health care providers learn about both the medical and legal aspects of providing emergency contraception so that they can make this important method of pregnancy prevention available to their patients. While a dedicated product may soon gain US Food and Drug Administration approval and go on the market, it is still important for health care providers to be aware of the legal issues surrounding the various aspects of both on- and off-label provision of emergency contraceptive pills. This paper provides an overview of the legal issues involved and suggests that there are a number of ways that health care providers can make emergency contraceptive pills available and readily accessible to patients with no serious legal risk.

REVIEW, TUTORIAL

The status of dedicated products**J Am Med Womens Assoc 1998;53(5 Suppl 2):225**

Camp SI

Emergency contraception (EC) will not become a standard reproductive choice in the absence of dedicated products. Emergency contraception products based on the Yuzpe regimen have been available in Western Europe for a number of years. Levonorgestrel-only products are registered in 29 countries. Dedicated products of both types are being introduced into many developing countries and the United States.

TUTORIAL

Research on mifepristone and levonorgestrel in comparison with the Yuzpe regimen**J Am Med Womens Assoc 1998;53(5 Suppl 2):222-4, 232**

von Hertzen H

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Women should be informed that it is possible to prevent unwanted pregnancy after intercourse in most cases by effective emergency contraception (EC). The currently used hormonal method, the Yuzpe regimen, however, has unpleasant side effects. The UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research training in Human Reproduction has worked on developing improved methods of EC for the last ten years. This research has focused on levonorgestrel and mifepristone. Now that results from large clinical studies are becoming available, they suggest that both these compounds are better tolerated and appear even more effective than the Yuzpe regimen. The challenge now is to implement the research results by making better emergency contraceptives a reality for women.

REVIEW, TUTORIAL

Safety of emergency contraception

J Am Med Womens Assoc 1998;53(5 Suppl 2):219-21

Glasier A

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Emergency contraception (EC) prevents pregnancy. Four regimens are available in different parts of the world, a combination of ethinyl estradiol and levonorgestrel, levonorgestrel alone, mifepristone, and emergency insertion of an intrauterine device. All the regimens are also used either as long-term contraception or, in the case of mifepristone, as an abortifacient, and considerable data indicate their safety when used in these ways. Data on safety when the regimens are used as EC are lacking, but theoretically, and from practical experience, all appear to be extremely safe, particularly when compared to the risks of pregnancy. There has been a tendency to over-"medicalize" EC. Prescribing EC is simple. Consideration should be given to making EC available off prescription because it is so safe.

REVIEW, TUTORIAL

Emergency contraception: a global overview**J Am Med Womens Assoc 1998;53(5 Suppl 2):215-8, 237**

Westley E

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Emergency contraception, sometimes referred to as "morning after" or postcoital contraception, provides a second chance for women who experience contraceptive failure or do not use a method, as well as for women who experience unplanned intercourse, including coerced sex or rape. The two primary methods of emergency contraception are postcoital use of a higher dose of oral contraceptive pills and insertion of an intrauterine device (IUD). Both can significantly reduce a woman's chance of becoming pregnant (75% and 99% respectively). Knowledge of emergency contraception is crucial, since women must know they can prevent pregnancy after intercourse in order to seek out treatment. While rates of unwanted pregnancy vary in different countries and among population groups, the need for emergency contraception is critical worldwide. However, the availability of emergency contraception differs widely. It is most extensively used in Europe, but is still a new method in other countries, including the United States.

REVIEW, TUTORIAL

Emergency contraception: a modality whose time has come

J Am Med Womens Assoc 1998;53(5 Suppl 2):212, 232

Rosenfield A

EDITORIAL

GyneFIX. The frameless intrauterine contraceptive implant--an update for interval, emergency and postabortal contraception

Br J Fam Plann 1999 Jan;24(4):149-59

Wildemeersch D, Batar I, Webb A, Gbolade BA, Delbarge W, Temmerman M, Dhont M, Guillebaud J
International Study Group on Intrauterine Drug Delivery, Dept of Ob/IGyn, University Hospital, Ghent, Belgium.

This article reviews the clinical experience with the GyneFix intrauterine implant system for interval, emergency and post-abortion contraception. The relatively high rate of unintended pregnancies and abortions in the world signifies that greater access to contraception is necessary. Unwanted pregnancies and abortions could be avoided by widening the range of effective and acceptable contraceptive methods for use in situations where current methods are far from optimal. High effectiveness, protection against sexual transmitted infections, long duration of action, reversibility and safety are some of the most important attributes of contraceptives valued by women. The development of the frameless intrauterine device is a response to the need to develop contraceptives with high user continuation rate. GyneFix has the lowest failure rate of all copper IUDs currently available. Its performance is further optimised by the atraumatic frameless design which minimises the side effects and discomfort experienced with conventional IUDs. GyneFix could, therefore, be a useful new contraceptive option in looking at ways to reduce the number of unwanted pregnancies and induced abortions.

REVIEW, TUTORIAL

Emergency contraception: change in knowledge of women attending for termination of pregnancy from 1984 to 1996

Br J Fam Plann 1999 Jan;24(4):121-2

Gordon AF, Owen P

Department of Obstetrics and Gynaecology, Ninewells Hospital and Medical School, Dundee, UK.

OBJECTIVE: To compare the knowledge of emergency contraception in women attending hospital for termination of pregnancy in 1984 and 1996. **DESIGN:** A questionnaire survey. **SETTING:** Ninewells Hospital, Dundee. **SUBJECTS:** Cohorts of 100 consecutive women undergoing termination of pregnancy in 1984 and 1996. **RESULTS:** Over this 12 year period, there has been a significant improvement in the knowledge of emergency contraception. Seventy three per cent had a good knowledge of the postcoital pill in 1996 compared to 12 per cent in 1984 ($p = < / = 0.0001$). There has been a significant rise in the use of condoms (60 per cent vs 32 per cent; $p = < / = 0.001$) and the number of conceptions due to condom accidents (38 per cent vs eight per cent; $p = < / = 0.0001$). Although most women in the 1996 cohort recognised a reason for contraceptive failure and had adequate knowledge of emergency contraception, only 17 per cent considered the possibility of pregnancy. **CONCLUSION:** Poor knowledge of postcoital contraception is no longer a major factor leading to the failure of women to obtain emergency contraception. Improved uptake in the use of emergency contraception is likely to result from a greater awareness of the possibility of condom failure and easier availability of the postcoital pill.

JOURNAL ARTICLE

[Not using contraception among women requesting abortion] (IN NORWEGIAN)**Tidsskr Nor Laegeforen 1999 Jan 20;119(2):201-3**

Knutsen M, Furnes K, Moen MH

Det medisinske fakultet, Norges teknisk-naturvitenskapelige universitet, Trondheim.

The aim of this survey was to examine the number of abortion applicants not using contraception at the time of conception, to shed light on the reasons for this, and to acquire information about the knowledge of postcoital anticonception in this patient group. The registered data is collected from precoded medical records at the University Hospital of Trondheim comprising 2,074 women applying for abortion in the period 1.1. 1995-15.7. 1997. The 291 applying for abortion 15.1-15.7. 1997, and who had not used contraception were given a questionnaire. 160 (55%) answered the questionnaire. During the period of 2.5 years 57.4% had not used contraception at the time of conception. The tendency of non-use has increased significantly during the last 2.5 years. Concern about sideeffects was the most common reason for not using contraceptives (36%). One third trusted the rhythm method and coitus interruptus. The postcoital pill was known by 93%; of the 61 women who had considered using it, 67% thought of it too late. To prevent unwanted pregnancies, it is important to focus on the positive health effects of oral contraception. Information efforts should especially be aimed at young and single women, who represent the majority of the non-users. The cost is no great impediment to the use of contraception. Availability of emergency contraception should be improved.

JOURNAL ARTICLE

UK accident and emergency departments and emergency contraception: what do they think and do?

J Accid Emerg Med 1999 Jan;16(1):35-8

Gbolade BA, Elstein M, Yates D

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OBJECTIVES: A postal questionnaire survey was conducted to assess what staff in UK accident and emergency (A&E) departments thought of providing an emergency contraception service, the degree of enthusiasm in and level of provision of the service, and staff attitudes to the introduction or continuation of provision of the service. **METHODS:** A questionnaire was sent to all 560 departments providing A&E services in the UK. **RESULTS:** Of the 560 units sent questionnaires, 355 (63.4%) replied. Half the units were located in small county towns, and a quarter in large towns. Requests for emergency contraception were received by 96% of responding units, but only 57% provided treatment. Requests for emergency contraception in 84 of these units ranged between one and 50 per month. The A&E senior house officer (SHO) and the gynaecology SHO and registrar prescribed most of the pills. Nurses were more involved in nurse led or general practitioner (GP) led units. Initial treatment only was given by 77% of providing units while the remainder also discussed subsequent contraception. Follow up was arranged with GPs by 92 units, and with family planning clinics by 66 units. Information packs were available in only 37 providing units. A total of 155 of providing units felt it was worthwhile and 56% of respondents thought emergency contraception should be provided by A&E departments. However, 91 units could identify one or more groups within the hospital who were antagonistic to provision by A&E departments, of which non-A&E medical staff formed the largest group. Over the counter availability of emergency contraception was not supported by 62% of respondents.

CONCLUSION: The results show that while the female population appears to see a need for emergency contraception services to be provided in A&E departments, there is some reluctance by UK A&E departments to provide the service. Given the current interest in approaches to reducing unplanned pregnancies, especially in teenagers, provision of emergency contraception by A&E departments requires a pragmatic approach to ensure their cooperation in providing the service when alternative sources of provision are not available.

JOURNAL ARTICLE

The effects of self-administering emergency contraception

J Nurse Midwifery 1999 Jan-Feb;44(1):82-4

Stehle K

Elizabeth Seton Childbearing Center, New York, New York, USA.

CLINICAL TRIAL, RANDOMIZED CONTROLLED TRIAL

Provider attitudes toward dispensing emergency contraception in Michigan's Title X programs

Fam Plann Perspect 1999 Jan-Feb;31(1):39-43

Brown JW, Boulton ML
School of Public Health, University of Michigan, Ann Arbor, USA.

JOURNAL ARTICLE

**Timing of emergency contraception with levonorgestrel or the Yuzpe regimen.
Task Force on Postovulatory Methods of Fertility Regulation**

Lancet 1999 Feb 27;353(9154):721

Piaggio G, von Hertzen H, Grimes DA, Van Look PF

LETTER

Comparison of three single doses of mifepristone as emergency contraception: a randomised trial. Task Force on Postovulatory Methods of Fertility Regulation

Lancet 1999 Feb 27;353(9154):697-702

BACKGROUND: Mifepristone is a highly effective and well-tolerated emergency contraceptive when given in a dose of 600 mg within 72 h of unprotected coitus. We assessed whether the same effectiveness can be achieved with lower doses of mifepristone (50 mg and 10 mg) and a longer postcoital treatment period (120 h). **METHODS:** We undertook a multicentre, single-masked, randomised trial in 11 family-planning clinics in Australia, China, Finland, Georgia, the UK, and the USA. 1717 healthy women with regular menstrual cycles who requested emergency contraception within 120 h of unprotected coitus were randomly assigned to three treatment groups. **FINDINGS:** 32 women were lost to follow-up and one was pregnant before treatment. The 600 mg, 50 mg, and 10 mg groups did not differ in the proportions of pregnancies (seven [1.3%] of 559, six [1.1%] of 560, and seven [1.2%] of 565). Two pregnancies (both in the 50 mg group) were tubal. Among women without further acts of intercourse, treatment delay did not appear to influence the effectiveness. No major side-effects occurred, except a delay in the onset of next menses, significantly ($p < .001$) related to the mifepristone dose. **INTERPRETATION:** Lowering the dose of mifepristone sixty-fold did not decrease its effectiveness as an emergency contraceptive under typical use, though a study of this size cannot exclude differences in effectiveness up to almost three-fold. Lower doses of mifepristone were associated with less disturbance of the menstrual cycle. Thus, a dose as low as 10 mg seems preferable to the 600 mg dose.

CLINICAL TRIAL, RANDOMIZED CONTROLLED TRIAL, MULTICENTER STUDY

Emergency contraception: is it time to change method?

BMJ 1999 Feb 6;318(7180):342-3

Webb A

EDITORIAL

Emergency contraception: lack of awareness among patients presenting for pregnancy termination

J Pediatr Adolesc Gynecol 1999 Feb;12(1):11-5

Jamieson MA, Hertweck SP, Sanfilippo JS

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STUDY OBJECTIVE: Emergency contraception, otherwise known as postcoital contraception, refers to a group of birth control modalities that, when used after unprotected intercourse within defined time constraints, can markedly reduce the risk of a resultant unintended pregnancy. The English literature, using British and American awareness data, consistently claims that these contraceptive options are underutilized in the United States because of a lack of patient and physician awareness of their existence. The objective of this study was to determine the level of awareness of postcoital contraceptive techniques in a population of American women who were presenting for pregnancy termination. The secondary goal was to calculate (theoretically) how many of these surgical terminations could have been prevented through the use of postcoital contraception. **METHODS:** A questionnaire was administered to patients presenting to an abortion clinic. It was intended to anonymously identify patient demographics and knowledge of the various emergency contraceptive options and, in hindsight, to determine what percentage of these women would have been willing candidates for one of these medical modalities. On completing the questionnaire, all patients received an emergency contraceptive information sheet for future consideration. **RESULTS:** Eighty-three patients completed the study. They ranged in age from 15 to 44 years (mean, 24 years). Forty-six percent of the patients were 21 years of age or younger. A total of 71% of all patients had no real knowledge of the existence of emergency contraceptive options; 26% had some limited knowledge, and only 3% had somewhat complete and valuable information. Fifty-one percent of the patients would have been appropriate, realistic, and willing candidates for at least the emergency contraceptive pill. Assuming at least a 75% effectiveness rate for the emergency contraceptive pill, 38% of the surgical pregnancy terminations performed on this population of women could have been avoided. **CONCLUSION:** Our data confirm that emergency contraceptive options are underutilized because of a lack of patient awareness. Contraception education, especially directed toward adolescents, should include disseminating enhanced information about postcoital contraception options.

JOURNAL ARTICLE

The risk of venous thromboembolism in users of postcoital contraceptive pills.**Contraception 1999 Feb;59(2):79-83**

Vasilakis C, Jick SS, Jick H

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Postcoital contraceptive pills (PCP) have recently been approved for use as emergency contraception in the United States. The objective of this study was to assess the risk of idiopathic venous thromboembolism (VTE) in relation to exposure to PCP, and to better quantify the risk of idiopathic VTE associated with current oral contraceptive (OC) use and pregnancy. A population-based cohort study with a nested case-control analysis was conducted using women from the General Practice Research Database. There were no women with an outcome of idiopathic VTE with current exposure to PCP. The incidence rates for various exposures were 3.0/100,000 person-years for the unexposed, 5.3/100,000 person-years for second generation OC, 10.7/100,000 person-years for third generation OC, and 15.5/100,000 person-years in pregnant (or postpartum) women. The relative risk estimates were 1.7 (95% CI 0.3-10.5) for second generation OC, 4.4 (95% CI 1.0-18.7) for third generation OC, and 6.3 (95% CI 1.2-33.5) for pregnancy. Short-term use of PCP is not associated with a substantially increased risk for developing VTE.

Pregnancy prevention using emergency contraception: efficacy, attitudes, and limitations to use

J Pediatr Adolesc Gynecol 1999 Feb;12(1):3-9

Schein AB

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Emergency contraception, also called postcoital contraception, is the use of hormonal or mechanical methods to prevent pregnancy after an episode of unprotected intercourse. Although a number of methods of emergency contraception exist, its use in the United States is not widespread. This report reviews studies on the efficacy of hormonal methods of emergency contraception, as well as the literature on women's and physicians' knowledge of and attitudes toward this method of preventing pregnancy. Articles were selected for this review from a MEDLINE search using the term "postcoital contraception." These studies show that a variety of hormonal regimens are effective in reducing the chance of pregnancy when administered within 72 hours of an episode of unprotected intercourse. Failure rates range from 0%-4.66%, depending on the regimen and the study, although some controversy exists about how to calculate efficacy. Recent studies indicate that mifepristone (RU486) may be more effective than other methods, with fewer side effects. However, the more significant issue surrounding emergency contraception may be the reasons for its infrequent use in this country. A number of limitations to use have been identified in the literature, including lack of knowledge of the method among patients and physicians, inadequate counseling, and fears that widespread use of emergency contraceptives would lead to less consistent use of other methods of contraception.

REVIEW, TUTORIAL

Levonorgestrel versus the "Yuzpe" regimen. New choices in emergency contraception

Can Fam Physician 1999 Mar;45:629-31

Lee SM, Dunn S, Evans MF

Department of Family and Community Medicine, University of Toronto.

JOURNAL ARTICLE

Emergency contraception in a travel context

J Travel Med 1999 Mar;6(1):24-6

Patton PG

Traveller's Medical and Vaccination Centre, Sydney, Australia.

This paper highlights the advantages which emergency contraception medication can offer to female travelers. It also outlines the history of emergency contraception, the methods available, and the side effects. The Yuzpe method is discussed in detail, including mode of action, side effects and effectiveness. There are no absolute contraindications, but issues such as clotting factors, migraine and teratogenicity are discussed. The availability of suitable medication in the event of failed contraception or rape could prove invaluable. Under a multitude of travel situations it may be very difficult to locate a medical practitioner who is able to provide the required medication within the crucial time frame. PMID: 10071369, UI: 99170763

TUTORIAL

Emergency contraception in a travel context

J Travel Med 1999 Mar;6(1):1-2

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Emergency contraception prevents pregnancy after unprotected intercourse. In his paper Peter Patton highlights the potential value of emergency contraception for women who travel. In addition to the common indications for emergency contraception-unprotected intercourse and accidents with condoms-Patton cites particular difficulties that travelers might encounter, gastrointestinal upset; changes in time zones; changes in routine; difficulty with looking after female barrier methods and rape. An additional problem which we see not infrequently in our clinics is theft. Women tend to keep contraceptives in their handbag and if this is stolen so is their contraception. Emergency contraception is underused because it must be taken within 72 hours of intercourse. This is a problem which all women face but one which is particularly relevant for travelers who may be unable to find a doctor. Patton points out that language and cultural barriers may prevent access to emergency contraception. What he does not say is that in the majority of countries there is no licensed method of emergency contraception available and although alternatives exist many doctors are ignorant of these or, for a variety of reasons, refuse to prescribe. Furthermore-and in contrast to the evidence quoted by Patton-recent data from the World Health Organization (WHO)¹ suggests that the Yuzpe regimen of emergency contraception, on which Patton bases his discussions, may be less effective as time passes. In the WHO study the regimen prevented 77% of expected pregnancies if it was used within 24 hours of intercourse but only 36% when used between 25 and 48 hours and 31 % after 48 and before 72 hours. For this reason alone it makes sense for women to have supplies of emergency contraception available before it is required. Patton does not mention the value of combined oral contraceptive pills as a substitute for the Yuzpe regimen of emergency contraception. In 1997, aware that it might take some time before a licensed method became available in the USA, the Food and Drug Administration² issued advice to doctors listing which currently available brands of oral contraceptive pill could be used as emergency contraception and how to use them. Advice of this sort to travelers would be particularly useful since the pill is available in most countries, and in some of them a doctor's prescription is not necessary. Possibly better than the Yuzpe regimen in terms of efficacy and certainly better in terms of side effects, levonorgestrel alone (0.75 mg twice, 12 hours apart) is already marketed in some Eastern European and Asian countries.¹ It is likely to become available soon in Western Europe and, like Yuzpe, can be 'home-made' using supplies of levonorgestrel progestogen-only pills (although rather a lot of tablets need to be taken!). Patton states correctly that there are no contraindications to the Yuzpe regimen yet many doctors are still concerned about cardiovascular risks (particularly venous thromboembolism) which they extrapolate from long term use of the contraceptive pill. Levonorgestrel alone is clearly an even safer preparation. Mifepristone is probably more effective, safer and has fewer side effects than either Yuzpe or levonorgestrel.³ It is widely available as an emergency contraceptive in China-an increasingly popular travel destination. It is likely that Patton's article will upset some readers. The topic of emergency contraception is guaranteed to raise a variety of issues. Many doctors are concerned that easy access to emergency contraception will discourage the use of more reliable methods and particularly condoms which are the only method conferring protection against sexually transmitted infections (STIs). This is particularly relevant to women traveling in parts of the world where STIs and particularly HIV and AIDS are common. However, the great majority of women travelers are well aware of these risks and are already extremely concerned to avoid infection.

Updated estimates of the effectiveness of the Yuzpe regimen of emergency contraception.

Contraception 1999 Mar;59(3):147-51

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The purpose of this study was to provide revised estimates of the effectiveness of the Yuzpe method of emergency contraception. Through a literature search, we identified eight studies that present the number of women treated and outcome of treatment by cycle day of unprotected intercourse relative to expected day of ovulation. Using five sets of external estimates of conception probabilities by cycle day of intercourse among women not using contraception, we assessed the effectiveness of the Yuzpe regimen. The 45 estimates of effectiveness, based on eight separate studies and the eight studies combined and five different sets of conception probabilities by cycle day, ranged from a low of 56.4% to a high of 89.3%. Our preferred point estimate is that the Yuzpe regimen reduces the risk of pregnancy by 74.1%, with a 95% confidence interval extending from 62.9% to 79.2%. True effectiveness is likely to be > 74% because treatment failures (observed pregnancies) include women who were already pregnant when treated and women who became pregnant after being treated.

REVIEW, TUTORIAL

Safety and effectiveness of hormonal postcoital contraception: a prospective study.**Eur J Contracept Reprod Health Care 1999 Mar;4(1):27-33**

Espinos JJ, Senosiain R, Aura M, Vanrell C, Armengol J, Cuberas N, Calaf J
Department of Obstetrics and Gynecology, Universitat Autònoma, Hospital de la Santa Creu i
Sant Pau, Barcelona, Spain.

OBJECTIVE: The aim of this study was to evaluate the demographic characteristics of the population attending our hospital requesting postcoital contraception and to determine the effectiveness of the method and its side-effects. **METHODS:** A total of 503 women asking for postcoital contraception were included in a prospective open trial. After filling in a questionnaire dealing with demographic and contraceptive data, we prescribed an ethinylestradiol-levonorgestrel combination (100 micrograms/500 mg for two doses 12 h apart). **RESULTS:** Only 487 women were available for analysis of demographic data. A further 77 were excluded because they presented irregular menstrual cycles and 55 cases were lost for follow-up. Mean age was 22.6 +/- 5.25 years and 35.9% of cases came to the center within the first 5 h after unprotected intercourse. Only 18.8% had previously asked for postcoital contraception. Breakage of condom was the most common reason for request (81.9%). Two pregnancies occurred in the remaining 355 women. According to Dixon's method 15.5 pregnancies should be expected being the overall efficacy of 87.14%. There were no serious adverse effects. Nausea and vomiting (16.33%) were the most prevalent and 59% of the users menstruated at the expected time whilst menses were delayed in 6% of the cases. **CONCLUSION:** The combination of ethinylestradiol and levonorgestrel in low doses is an effective and safe method of postcoital contraception.

Emergency contraception.

J Am Med Womens Assoc 1999 Spring;54(2):101-2

Comment on: J Am Med Womens Assoc 1998;53(5 Suppl 2):233-7

Gibbs JN

COMMENT, LETTER

Knowledge, attitudes, and practices regarding emergency contraception among nurses and nursing students in two hospitals in Nairobi, Kenya.

Contraception 1999 Apr;59(4):253-6

Gichangi PB, Karanja JG, Kigundu CS, Fonck K, Temmerman M
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A cross-sectional descriptive study on knowledge, attitudes, and practice about emergency contraception (EC) was conducted among nurses and nursing students using a self-administered questionnaire. One-hundred-sixty-seven qualified nurses and 63 nursing students completed the questionnaire. Over 95% listed at least one regular contraceptive method but only 2.6% spontaneously listed EC as a contraceptive method, whereas 48% of the respondents had heard of EC. Significantly more nursing students than qualified nurses were familiar with EC. Knowledge about the types of EC, applications, and side effects was poor and 49% of the respondents considered EC as an abortifacient. Of those familiar with EC, 77% approved its use for rape victims and 21% for adolescents and schoolgirls. Only 3.5% of all respondents had personally used EC in the past, 23% of those familiar with EC intend to use it in the future, whereas 53% intend to provide or promote it. The view that EC was abortifacient negatively influenced the decision to use or provide EC in the future. The present findings suggest that the level of knowledge of EC is poor and more information is needed. These findings indicate the potential to popularize emergency contraception in Kenya among nurses and nursing students.

Integrated clinical service for sexual assault victims in a genitourinary setting.

Sex Transm Infect 1999 Apr;75(2):116-9

Bottomley CP, Sadler T, Welch J

Department of Sexual Health, King's College Hospital, London.

BACKGROUND: Reported sexual assault is increasing, and the diverse immediate and longer term needs of the victim are usually met by exposure to a number of healthcare professionals often in different locations, involving delays and travel, increasing the trauma for the victim. **OBJECTIVES:** To set up a centre to address the immediate and longer term needs of the sexual assault victim and review issues arising during the development of the service. **METHODS:** Description of setting up the service in the genitourinary medicine department of Kings College Hospital, south London, and the aspects of care offered. **RESULTS:** The number of victims referred by police increased from 15 in 1992 to 58 in 1996. In 1996, 55 female and three male victims were seen. 23 different police stations brought victims for examination; mean age of the victim was 27 years (range 14-60), median time between assault and examination was 22 hours (range 3 hours-3 months); 23% had genital injuries, 59% had other physical injury, and 11% needed further hospital care. 71% accepted screening for sexually transmitted infection (STI), 21% had an STI diagnosed, 16% of the women required emergency contraception, 26% received prophylactic antibiotics, and 58% saw a health adviser. 70% had a follow up appointment arranged of which 50% attended. **CONCLUSION:** The high uptake of STI screening, emergency contraception, health adviser consultation, and follow up supports the concept of a comprehensive integrated system to meet the disparate needs of the victim while still obtaining the necessary forensic evidence. The wide catchment area of service users indicates gaps in services available for the assault victim. Earlier genitourinary involvement after sexual assault is becoming increasingly pertinent in relation to HIV prophylaxis.

Emergency contraception: The sooner the better (IN NORWEGIAN)

Tidsskr Nor Laegeforen 1999 Apr 30;119(11):1572

Aavitsland P

Emergency contraception.**Int J Clin Pract 1999 Apr-May;53(3):199-204**

Sarkar NN

Department of Reproductive Biology, All India Institute of Medical Sciences, New Delhi, India.

Emergency contraception means preventing pregnancy after unprotected sexual intercourse. This is also called postcoital contraception (PCC) or the 'morning-after pill'. High doses of oestrogen or progestogen or a combination of both may be used as PCC up to 72 hours after unprotected intercourse. The use of mifepristone as emergency contraception has also proved promising. Some women use emergency contraception, but there are many who do not know much about it. Users, providers and other health professionals need to be educated about this method. Emergency contraception does not fall within the ambit of abortion law, yet its acceptability depends on the legal, cultural and religious consideration of most countries. This method is safe and effective and could be used occasionally to prevent unwanted pregnancy.

REVIEW, TUTORIAL

Emergency contraception and retinal vein thrombosis.

Br J Ophthalmol 1999 May;83(5):630-1

Comment on: Br J Ophthalmol 1998 May;82(5):538-42

Lake SR, Vernon SA

COMMENT, LETTER

Statistical evidence about the mechanism of action of the Yuzpe regimen of emergency contraception.

Obstet Gynecol 1999 May;93(5 Pt 2):872-6

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OBJECTIVE: To determine whether published statistical evidence about the effectiveness of the Yuzpe regimen of emergency contraception provides insight about its mechanism of action. **DATA SOURCES:** We searched the literature for studies that present information on the effectiveness of the Yuzpe regimen, on the probability of conception by menstrual cycle day, or on the occurrence of ovulation in women treated with the regimen. Searches of the electronic databases MEDLINE, POPLINE, EMBASE, and BIOSIS were supplemented by scrutiny of the bibliographies of all papers identified through the electronic search. **METHODS OF STUDY SELECTION:** We identified a review of the effectiveness of the Yuzpe regimen based on all seven clinical trials that present the number of women treated on each cycle day and the outcome of each treatment; this review also provided external estimates of the probability of conception by cycle day of unprotected intercourse from two other clinical studies. We identified three clinical studies of ovulation after treatment with the Yuzpe regimen. We included all identified studies in our analysis. **TABULATION, INTEGRATION, AND RESULTS:** We compared 40 estimates of the actual effectiveness of the Yuzpe regimen with the maximum theoretical effectiveness that could be obtained if the regimen worked only by preventing or delaying ovulation. In the overwhelming majority of these comparisons, the former exceeded the latter. **CONCLUSION:** The Yuzpe regimen could not be as effective as it appears to be if it worked only by preventing or delaying ovulation.

REVIEW, TUTORIAL

Emergency contraception.

Nurse Pract 1999 May;24(5):20

Comment on: Nurse Pract 1999 Feb;24(2):44-8, 54, 56-7; quiz 58-9

Rosenberg A

COMMENT, LETTER

[Contraception in emergencies]. [Article in Hebrew]

Harefuah 1999 Jun 1;136(11):874-7

Mashiach R, Seidman DS

REVIEW, TUTORIAL

Emergency contraception.

Ceylon Med J 1999 Jun;44(2):60-2

Gunasekera PC
UNFPA, Colombo 7.

REVIEW, TUTORIAL

Review of newer contraceptive agents.**Cleve Clin J Med 1999 Jun;66(6):358-66**

Qureshi M, Attaran M

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Advances in contraceptive technology have made birth control more effective, convenient, and safe. We review the newer products and some under development, including the latest oral contraceptives, injectable progesterone, subdermal progestin implants, progesterone-releasing IUDs, emergency contraception, and male contraception.

REVIEW, TUTORIAL

Knowledge and practice of emergency contraception among Nigerian youths.

Int J Gynaecol Obstet 1999 Jul;66(1):31-2

Arowojolu AO, Adekunle AO

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Nigeria.

Barriers to the use of IUDs as emergency contraception.**Br J Fam Plann 1999 Jul;25(2):61-8**

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The intrauterine contraceptive device (IUD) is a very effective form of emergency contraception (EC). This author hypothesised that IUDs are an underused method and determined to evaluate potential barriers to IUD use. A postal survey of 100 family planning doctors and 100 general practitioners was conducted in Trent Region during March 1998 with a 70 per cent response rate. Lack of time was the most important factor that influenced doctor's decisions not to offer IUDs to the majority of women requesting emergency contraception. Most doctors registered concern about the risk of pelvic inflammatory disease. Misconceptions and a lack of accurate information contributed to participants reluctance to discuss IUDs as emergency contraception. Lack of time in consultations is a well-recognised issue in general practice. The risk of sexually transmitted infections is a nationwide concern, but is difficult to address without accurate data on the prevalence of the most common pathogens. Considerable effort would be required to increase doctors' knowledge and willingness to offer IUDs routinely to women requesting emergency contraception.

Knowledge of emergency contraception amongst female patients attending a department of genitourinary medicine.

Br J Fam Plann 1999 Jul;25(2):58-62

Mann MC, Radcliffe KW, Basarab M
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The aim of the study was to assess the knowledge of emergency contraception amongst new female patients attending an inner-city department of genitourinary medicine. Information was also sought about use of regular contraception and demography. Three hundred and ninety nine questionnaires were suitable for analysis. Half of the sample answered that the latest a woman could take emergency contraception after unprotected sex was three days. None of the sample knew that emergency contraception could be obtained up to five days. Twenty nine per cent of the sample reported sex without contraception during the menstrual cycle preceding attendance. Women who had ever used regular contraception in the past were statistically less likely to have reported unprotected sex in the menstrual cycle preceding attendance ($p=0.0000068$). Professional women were statistically less likely to have reported unprotected sex in the menstrual cycle preceding the clinic visit. Fourteen per cent of the sample had genital warts at this first clinic visit, 10 per cent had Chlamydia trachomatis, seven per cent had herpes simplex infection, six per cent had gonococcal infection and five per cent had trichomonal infection. Women who reported unprotected sex during the preceding menstrual cycle were not statistically more likely to have a sexually transmitted infection at this first clinic visit. A large number of women attending departments of genitourinary medicine are at risk of both pregnancy and also sexually transmitted infection. Staff working in all areas of sexual health need to have a good knowledge of both contraception and sexually transmitted infections in order to educate the clients on both aspects of unprotected sex.

Easy access to emergency contraception does not make it the contraceptive of choice.

BMJ 1999 Jul 10;319(7202):D

Questionnaire study of use of emergency contraception among teenagers.

BMJ 1999 Jul 10;319(7202):91

Kosunen E, Vikat A, Rimpela M, Rimpela A, Huhtala H
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33101 Tampere, Finland.

Prescribing and managing oral contraceptive pills and emergency contraception for adolescents.

Pediatr Clin North Am 1999 Aug;46(4):695-718

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Combination OCPs are safe and effective ways to prevent unintended adolescent pregnancy if they are used properly. Numerous noncontraceptive benefits of OCPs can bolster continued combination OCP use. Progestin-only OCPs are an option, particularly for young women with medical contraindications to taking estrogens; however, because of their lower efficacy, progestin-only pills are not the first choice for oral contraception for adolescents. Health care providers can give young women a second chance to prevent unintended pregnancy by improving their access to emergency contraception through educating and counseling about emergency contraception at all office visits, by prescribing emergency contraceptive pills in advance, or by prescribing emergency contraceptive pills over the telephone.

REVIEW, TUTORIAL

Condom failures in women presenting for abortion.**N Z Med J 1999 Aug 27;112(1094):319-21**

Sparrow MJ

Parkview Clinic, Wellington Hospital, Capital Coast Health Ltd.

AIMS: To document the main reasons for condom failure in women presenting for first trimester termination of pregnancy. **METHODS:** From 1990-97 an audit was carried out, on the 3283 cases personally operated on by the author, using the information routinely obtained during pre-operative counselling. **RESULTS:** Two sets of figures were obtained. The first (minimum figures) were restricted to those who used condoms on every occasion of coitus (746 or 22.7% of all women seen). The second (maximum figures) included all of these plus those who did not use condoms on every occasion or who used condoms in conjunction with another method (1494 or 45.5% of all women seen). In this expanded group, there was no obvious cause for the failure in 446 (29.9% of condom users). The main reason for failure was not using condoms every time (736 or 49.3% of condom failures). Leakage of semen occurred in 321 cases (21.5% of condom failures) and 104 of these had used emergency contraception which had also failed (7.0% of condom failures). Condoms failed more often in women under 25 years of age. **CONCLUSIONS:** There is a need for better education on correct condom use and improved availability of emergency contraception. There is also a need for greater standardisation in reporting contraceptive failure.

Practice tips. Emergency contraception.

Can Fam Physician 1999 Sep;45:2063

Greiver M

UK accident and emergency departments and emergency contraception.

J Accid Emerg Med 1999 Sep;16(5):391

Comment: on: J Accid Emerg Med 1999 Jan;16(1):35-8

McGlone R

COMMENT, LETTER

Bundling a pregnancy test with the Yuzpe regimen of emergency contraception.**Obstet Gynecol 1999 Sep;94(3):471-3**

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The recent United States Food and Drug Administration approval of a commercial kit containing the Yuzpe regimen for emergency contraception is a welcome event. Unlike emergency contraceptive pills sold in other countries, however, the United States product has a pregnancy test bundled with the pills. The test could identify existing pregnancies and avoid unnecessary use of the pills, although any protection against lawsuits alleging injury to an embryo is speculative. Conversely, no major medical organization recommends routine pregnancy testing before using emergency contraceptive pills. The test might stigmatize the Yuzpe regimen as being dangerous to an embryo. Difficulty in understanding the pregnancy test instructions could, paradoxically, deter some women from using the pills after having bought them. The bulky size of the pregnancy test reagent stick makes the package indiscreet, and the test adds unnecessary cost to emergency contraception. The greatest usefulness of the test could be to confirm or exclude a pregnancy several weeks after taking the pills, rather than before. If bundling an unnecessary test with emergency contraception is the only way to bring this useful product to the United States market, then the public health benefits could outweigh the disadvantages. However, this approach sets a worrisome precedent and further isolates the United States from the international medical community.

Women's experiences of obtaining emergency contraception: a phenomenological study.

J Clin Nurs 1999 Sep;8(5):601-9

Bell T, Millward J
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Emergency contraception (EC) has been available since 1984 but has been labelled the 'best kept secret' (Winfield, 1995). Because EC was originally termed 'the morning after pill', many people interpreted this literally and missed an opportunity to use the method. More recent publicity has dropped this term and emphasized that the method is effective up to 72 h after unprotected intercourse or contraceptive failure (Burton & Salvage, 1990). Uptake of EC has steadily increased since 1985 but there is still evidence that younger women in particular are least aware of its existence.

Emergency contraception.

Ceylon Med J 1999 Sep;44(3):142-3; discussion 143-5

Comment on: Ceylon Med J 1999 Jun;44(2):60-2

Wijesinghe PS

COMMENT

Emergency contraception.

Ceylon Med J 1999 Sep;44(3):142; discussion 143-5

Comment on: Ceylon Med J 1999 Jun;44(2):60-2

Paranavitane S

COMMENT

Women's experience and satisfaction with emergency contraception.**Fam Plann Perspect 1999 Sep-Oct;31(5):237-40, 260**

Harvey SM, Beckman LJ, Sherman C, Petitti D
Pacific Institute for Women's Health, Los Angeles, CA, USA.

CONTEXT: If any new contraceptive technology is to become a viable option for decreasing unintended pregnancies, women must be willing to use the method and find it acceptable. However, because emergency contraceptive pills have not been widely used, very little is known about this method's acceptability. **METHODS:** Telephone interviews were conducted with 235 women who had received emergency contraceptive pills through a demonstration project at 13 Kaiser Permanente medical offices in San Diego to assess women's experience and satisfaction with the pills. **RESULTS:** More than two-thirds of the women (70%) were using a contraceptive method prior to their need for emergency contraception, and 73% of these users were relying on condoms. When asked about the situation that led to unprotected intercourse, 45% reported that their condom broke or slipped, while 23% said they had had unplanned sex. More than three-quarters of the sample (81%) experienced at least one side effect. The overwhelming majority were satisfied with emergency contraceptive pills (91%) and would recommend them to friends and family members (97%). Just one-quarter of the sample (28%) believed that emergency contraceptive pills should be dispensed over the counter, and an even lower proportion agreed that they should be available from vending machines (6%). **CONCLUSIONS:** Because women were overwhelmingly accepting of emergency contraceptive pills, found them easy to use and did not intend to substitute them for regular contraceptive use, this new method is an important addition to the contraceptive options available to women, providing a way to prevent pregnancy after unprotected intercourse or method failure.

Family planning training in Maryland family practice and obstetrics/gynecology residency programs.

J Am Med Womens Assoc 1999 Fall;54(4):208-10

Cheng D

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OBJECTIVE: To examine the extent of family planning and abortion training in Maryland family practice (FP) and obstetrics/gynecology (OB) residency training programs. **METHODS:** All final-year residents in every FP and OB residency training program in Maryland were asked in 1998 how many cases (0, 1-10, > 10) of ten methods of contraception and abortion they had managed. **RESULTS:** Seventy-five percent (55) of the 73 residents responded. Fifty percent of FP residents had never inserted an intrauterine device (IUD), 43% had never inserted an implant (Nor-plant), 37% had never prescribed emergency contraceptive pills, and 30% had never fitted a diaphragm. Ninety-seven percent of FP residents had no experience with elective termination of pregnancy, and 83% had no experience with sterilization. Twenty percent of OB residents had never inserted an IUD, 16% had never inserted implants or prescribed emergency contraceptive pills, 20% had never fitted a diaphragm, and 36% had no experience in elective termination of pregnancy. Not one FP resident had inserted or fitted more than ten IUDs, implants, diaphragms, or cervical caps. Except for oral and injectable contraception, the majority of OB residents had not managed more than ten cases of any other reversible contraceptive method: 80% had not inserted more than ten IUDs, 72% had not inserted more than ten implants, 88% had not fitted more than ten diaphragms, and 100% had not fitted more than ten cervical caps. **CONCLUSION:** These survey results indicate a need for more formal instruction in most contraceptive methods for OB and FP residency programs in Maryland. This study concurs with previous national studies showing deficits in family planning training.

Establishing an educational programme for nurses to supply emergency hormonal contraception (combined method) to protocol.

Br J Fam Plann 1999 Oct;25(3):118-21

Brittain D

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This paper gives an account of an innovative educational programme developed by the Department of Midwifery Studies at the University of Central Lancashire (UCLAN) in 1995. The North West Regional Health Authority (NWRHA) approached the Department of Midwifery Studies to develop an educational programme for family planning nurses to supply the combined method of emergency hormonal contraception (EHC) under protocol when a doctor was not present. The purpose was to increase the availability and accessibility of EHC for young people in the North West region. The 3-day programme was designed to complement previous ENB 901/900 training, and also to provide the nurses with the specific skills and knowledge required to undertake this new role. One hundred and thirty-nine nurses from the North West area attended the programme between 1995-1998. Students were assessed both theoretically and clinically. Extending the role of family planning nurses to supply EHC gives purchasers and providers of sexual health care the potential to offer a wider range of accessible services. The recently published interim Crown Report¹ on the supply and administration of medicines under group protocols states that protocols should specify clear arrangements for professional responsibility and accountability. Appropriate training is essential to ensure that the extended role of the nurse in family planning is fully understood.

Issue of emergency hormonal contraception through a casualty department in a community hospital.

Br J Fam Plann 1999 Oct;25(3):105-9

Heard-Dimyan J

Powys Health Care Trust, Brecon, Wales.

The results of this survey show that sexually active women seeking emergency hormonal contraception are finding that a casualty department in a community hospital offers convenience, confidentiality and accessibility above all else. There is a growing tendency for those registered with the local practice to prefer to come to the hospital for post-coital contraception, even though casualty nurses are not family planning qualified. This applies especially to the under twenties. More needs to be done in persuading patients that ongoing contraception should be addressed. To this end, if casualty departments are the preferred outlets in the rural communities, then nurses need further training. All providers of emergency contraception in rural areas need to be aware that offering such a service by well trained RGNs working to a protocol could reduce the incidence of unintended conceptions amongst teenagers. At the same time, every effort has to be made to increase awareness of the availability of emergency hormonal contraception by advertising the sources of contraceptive advice, which could soon include pharmacists.

Pharmacists' concerns and perceived benefits from the deregulation of hormonal emergency contraception (HEC).

Br J Fam Plann 1999 Oct;25(3):100-4

Blackwell D, Cooper N, Taylor G, Holden K
School of Health Sciences, The University of Sunderland, Sunderland, Tyne & Wear, UK.

OBJECTIVE: To ascertain pharmacists' views, assess willingness for involvement and delineate individual perceived competence in the supply of deregulated hormonal emergency contraception (HEC). **DESIGN:** Cross-sectional postal questionnaire utilising closed, open and Likert-scale questions. **SUBJECTS:** Three thousand nine hundred and ninety-nine registered pharmacists abstracted from the mailing list of the Royal Pharmaceutical Society of Great Britain. **RESULTS:** In total 1543 (38.6%) questionnaires were returned and analysed. Overall 1165 (75.5%) of pharmacists stated their willingness to be involved in the deregulated supply of HEC. However, pharmacists identified the need for specific training before effective deregulation should take place. Overall, 616 (39.9%) of respondents felt individually competent to supply deregulated HEC with a positive association between perceived competence and willingness to supply deregulated HEC ($p < 0.05$). Pharmacists perceive the major benefits of deregulation to be a reduced unwanted pregnancy rate and a subsequent reduced abortion rate. They perceive that deregulation would allow quicker and less restricted access to HEC by clients, facilitating an increased overall supply of HEC. Pharmacists express a number of concerns, tempering their collective desire to see HEC deregulation. The majority of these concerns related to safeguarding clients and the possible adverse public health effects associated with the possible reduced use of barrier methods of contraception. **CONCLUSIONS:** Most pharmacists would be willing to supply HEC if it were deregulated to 'pharmacy only' from 'prescription only' medicine status. Although concerns were raised, these were mainly related to safety issues, with few pharmacists identifying moral and ethical barriers to deregulation. For effective deregulation to occur issues of professional competence need to be addressed.

Hormonal emergency contraception: moving over the counter?**J Clin Pharm Ther 1999 Oct;24(5):313-5**

Wearn AM, Gill PS

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Emergency contraception in Mexico City: what do health care providers and potential users know and think about it?

Contraception 1999 Oct;60(4):233-41

Langer A, Harper C, Garcia-Barrios C, Schiavon R, Heimburger A, Elul B, Delgado SR, Ellertson C

Population Council, Mexico City, Mexico.

Emergency contraception promises to reduce Mexico's high unwanted pregnancy and unsafe abortion rates. Because oral contraceptives are sold over-the-counter, several emergency contraceptive regimens are already potentially available to those women who know about the method. Soon, specially packaged emergency contraceptives may also arrive in Mexico. To initiate campaigns promoting emergency contraception, we interviewed health care providers and clients at health clinics in Mexico City, ascertaining knowledge, attitudes, and practices concerning the method. We found limited knowledge, but nevertheless cautious support for emergency contraception in Mexico. Health care providers and clients greatly overestimated the negative health effects of emergency contraception, although clients overwhelmingly reported that they would use or recommend it if needed. Although providers typically advocated medically controlled distribution, clients believed emergency contraception should be more widely available, including in schools and vending machines with information prevalent in the mass media and elsewhere.

Emergency contraception in Nairobi, Kenya: knowledge, attitudes and practices among policymakers, family planning providers and clients, and university students.

Contraception 1999 Oct;60(4):223-32

Muia E, Ellertson C, Lukhando M, Flul B, Clark S, Olenja J
Population Council, Nairobi, Kenya.

To gauge knowledge, attitudes, and practices about emergency contraception in Nairobi, Kenya, we conducted a five-part study. We searched government and professional association policy documents, and clinic guidelines and service records for references to emergency contraception. We conducted in-depth interviews with five key policymakers, and with 93 family planning providers randomly selected to represent both the public and private sectors. We also surveyed 282 family planning clients attending 10 clinics, again representing both sectors. Finally, we conducted four focus groups with university students. Although one specially packaged emergency contraceptive (Postinor levonorgestrel tablets) is registered in Kenya, the method is scarcely known or used. No extant policy or service guidelines address the method specifically, although revisions to several documents were planned. Yet policymakers felt that expanding access to emergency contraception would require few overt policy changes, as much of the guidance for oral contraception is already broad enough to cover this alternative use of those same commodities. Participants in all parts of the study generally supported expanded access to emergency contraception in Kenya. They did, however, want additional, detailed information, particularly about health effects. They also differed over exactly who should have access to emergency contraception and how it should be provided.

Emergency contraception: implications for nursing practice.**Nurs Stand 1999 Nov 3-9;14(7):38-43; quiz 44**

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Emergency contraception is often misunderstood by the general public and nurses alike. This article outlines information about methods of post-coital contraception that all nurses need to provide appropriate health advice to women in any nursing setting.

Update on the use of oral contraceptive pills for emergency contraception.

Med Health R I 1999 Nov;82(11):410-1

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Emergency contraception: is it always justifiable?

J Pediatr Adolesc Gynecol 1999 Nov;12(4):230-2

Comment on: J Pediatr Adolesc Gynecol 1999 Nov;12(4):229-30

Stradtman EW Jr

COMMENT

In support of emergency contraception.

J Pediatr Adolesc Gynecol 1999 Nov;12(4):229-30

Comment on: J Pediatr Adolesc Gynecol 1999 Nov;12(4):230-2

Gold MA

COMMENT

Emergency contraception: an anomalous position in the family planning repertoire?

Soc Sci Med 1999 Nov;49(10):1409-17

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Emergency contraception (EC) can be used up to 72 h after sex to prevent pregnancy. Internationally there is wide variation in the availability of EC. In the USA it has only recently (1997) won approval from the FDA, while the UK and New Zealand have seen calls for over the counter availability. In recent years surveys, editorials and opinion pieces in medical journals have pointed out that increased access to EC could help to tackle the unwanted pregnancy rate, especially among teenagers, and concluded that lack of knowledge of EC is the major barrier to use. However, women in a UK study have expressed concerns that it is not safe to use the method repeatedly and cited general practitioners (GPs) as one of the sources of this belief, which contradicts the professional guidelines and the rationale for de-regulation. A subsequent study sought to seek the views of GPs about prescribing EC and explored reasons for the gap between the views of women using UK family planning services, GPs and professionals at the public policy level. Data from two studies are presented. In the first study, 53 women seeking emergency contraception were interviewed at two family planning clinics. In the second, semi-structured telephone interviews were completed with a random sample of 76 GPs from three English health authorities. Interviews were recorded, transcribed and thematic analysis was conducted using the constant comparative method. EC was rarely described, by users or GPs, as an acceptable contraceptive option. Consultations for emergency contraception were viewed by GPs as an important opportunity to discuss the woman's future contraceptive needs. Repeated use of EC was not encouraged and a discussion of contraceptive needs could range from a mild enquiry to quite forceful messages contrasting EC to 'regular' and 'proper' methods. The medical literature suggests that EC is underused because of a lack of awareness. Commentators have recommended educating health professionals and women about EC and increasing availability through de-regulation. The data presented in this paper show that British GPs are not enthusiastic about the de-regulation of EC, but the reasons are complex and related to concerns about planned contraception and sexual behaviour. It is suggested that it may be because EC is used after sex that it seems to occupy an uncomfortable place within the contraceptive repertoire.

The politics of prevention. Issues in emergency contraception.

Adv Nurse Pract 1999 Nov;7(11):60-2

Peters S

Women's knowledge and attitudes about emergency contraception: a survey in a Melbourne women's health clinic.

Aust N Z J Obstet Gynaecol 1999 Nov;39(4):460-4

McDonald G, Amir L
Murdoch Institute, Australia.

The aim of the study was to determine the level of awareness of emergency contraception in women seeking pregnancy counselling and to investigate their attitudes towards emergency contraception. All women presenting for pregnancy counselling at a Melbourne women's health clinic in October 1997 were invited to complete a questionnaire detailing their contraceptive practices. One hundred and sixty-six questionnaires were distributed and 153 were completed (92% response rate). The majority of this sample population had heard of some form of emergency contraception and knew where to access it. However only 26% knew that emergency contraception should be taken within 72 hours of unprotected intercourse. Although 80% of the sample had heard of emergency contraception (or the morning after pill) only 9% used it in an attempt to prevent this pregnancy. The majority of the women surveyed support the increased availability of emergency contraception by rescheduling it to a non-prescription item and re-packaging as a single treatment.

Update on levonorgestrel for emergency contraception.

J Fam Pract 1999 Dec;48(12):1002

Strayer SM, Couchenour RL

LETTER

Pushing the frontiers of science: reflections on an Institute of Medicine study.**Int J Gynaecol Obstet 1999 Dec;67 Suppl 2:S93-9**

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A women-centered contraceptive research agenda was the focus of a 1996 Institute of Medicine Committee report. Priority was given to research on methods that act as a chemical or physical barrier to conception and to STDs including HIV; to menses inducers and once-per-month methods; and to male contraceptive methods. Much progress has been made since the 1996 report. This paper summarizes this progress. New research has been developed in the three priority areas, collaboration activities have been developed between the public and private sectors, and emergency contraception has been introduced to the US. Controversies are discussed in relation to immunocontraception, stem cell research and fetal tissue research. Finally there is a brief report on the lessons to be learned from the experience of the introduction of the implant, Norplant, in the US.

Collaborative research and development on mifepristone in China to reduce unwanted pregnancies and recourse to abortion.

Int J Gynaecol Obstet 1999 Dec;67 Suppl 2:S69-76

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A program proposed and executed by The Concept Foundation and funded by the Rockefeller Foundation demonstrates the feasibility of using private/public-sector collaboration for making mifepristone widely available. The application of mifepristone to emergency, luteal phase and menstrual induction contraception is being assessed in clinical research programs conducted in accordance with international standards for good clinical research. Opportunities for introduction of mifepristone in developing countries are being pursued using mifepristone produced in China in accordance with international standards of good manufacturing practice.

Women's knowledge of and attitudes towards emergency contraception in Hong Kong: questionnaire survey.

Hong Kong Med J 1999 Dec;5(4):349-352

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OBJECTIVE: To study the level of knowledge of and attitude towards emergency contraception in a group of women requesting the termination of pregnancy. **DESIGN:** Structured questionnaire survey. **SETTING:** Family Planning Association and university teaching hospital, Hong Kong. **PARTICIPANTS:** Two hundred women who requested the termination of an unplanned pregnancy between May 1997 and March 1998. **MAIN OUTCOME MEASURES:** Demographic data, basic knowledge of contraception, reasons for terminating the pregnancy, and knowledge and usage of emergency contraception. **RESULTS:** A substantial proportion (33.0%) of women was ignorant of the existence of emergency contraception. Only 10.0% of women had used emergency contraception before and only 2.5% had used it in an attempt to prevent this pregnancy. Of the 134 women who knew about emergency contraception, the main reason (41.8%) for not using it was risk-taking behaviour. More nulliparous women (88.5% versus 57.6%; $P<0.001$) and women younger than 20 years (84.0% versus 61.3%; $P<0.01$) had heard of emergency contraception. Women who were educated beyond secondary school level (71.0% versus 37.5%; $P<0.01$) and unmarried women compared with married, cohabiting, or divorced women (87.1% versus 49.5%; $P<0.001$) were also more likely to have heard of emergency contraception. Women younger than 20 years were more likely to have used this form of birth control in the past (18.0% versus 7.3%; $P<0.05$). **CONCLUSION:** There is a need to improve women's education about emergency contraception in Hong Kong.

A new model for collaboration--making emergency contraceptives available in developing countries.

Int J Gynaecol Obstet 1999 Dec;67 Suppl 2:S59-65; discussion S67

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Private/public-sector collaboration in contraceptive research and development offers a fresh opportunity to consider a holistic approach to making emergency contraception (EC) available in developing countries. Emergency contraception has been available since the 1970s but has remained under-utilized. Emergency contraception may be used by women who want to prevent a pregnancy and therefore has a specific use, in a specific situation. This paper highlights the distinct and reciprocal advantages of a collaborative approach between the Consortium for Emergency Contraception (the public sector) and a pharmaceutical company (the private sector), to the introduction of EC in developing countries. The importance of cultivating a public/private-sector collaborative approach, which serves the interests of both parties concerned, in order to foster progress in this important initiative, is highlighted.

Use and knowledge of hormonal emergency contraception.**Adv Contracept 1999;15(2):85-94**

Virjo I, Kirkkola AL, Isokoski M, Mattila K

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Hormonal emergency contraception (EC) is an acceptable means of postcoital prevention of pregnancy, but potential users should have information and education about it before they need it. The aim of this study was to establish how many women and how many men's partners have used hormonal EC and how well the respondents know the correct time to take EC pills. Random samples (393 women and 395 men) were drawn from the Finnish population register. Response rates were 56% for women and 45% for men. Of all responding women and men, 12% had themselves or together with their partners used EC. The proportion of EC users was highest in the younger age group among both women and men. It was greater among single and cohabiting women than among married women. Only a minority of respondents knew that EC pills could be taken up to 72 h after unprotected intercourse. Women who had used EC were most knowledgeable, as were also the younger age groups among both women and men. Awareness of the availability of EC and of its correct use should be further promoted to avoid unwanted pregnancies.