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Editorial
Emergency Contraception

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Every pregnancy should be a planned one and every birth a wanted one. But National Family Health survey of 1995 revealed that almost four out of five pregnancies are unplanned and one-fourth of these are unwanted. Universal use of contraception is a far fetched distant dream. Intercourse without contraceptive protection under situations like rape, forced sex, sexual abuse by close relatives and sexual exploitations of innocent adolescents and mentally handicapped is prevalent. To this may be added growing sexual promiscuity amongst today's carefree teenagers, illegitimate sex in unmarried & widows, unexpected sexual opportunity and infrequent occasional sex as situations loaded in favour of unprotected sex. Almost all pregnancies occurring in the above mentioned cases, unwanted and unacceptable as they are, end up in induced abortions, most often illegal ones, because of the very nature of the circumstances. These pregnancies can be prevented by emergency contraception. Burst or broken condom, pills missed or out of stock, displaced IUCD or diaphragm and nonuse of barrier methods also need emergency contraception.

In India 10 to 12 million abortions take place annually, resulting in 15 to 20 thousand maternal deaths, mainly the outcome of illegal abortions. Besides, great morbidity ensues, the extent of which can only be guessed.

Thus, pregnancies following unprotected sex are vastly damaging and should be prevented by timely resort to emergency contraception. Unfortunately, in our country the awareness and knowledge about emergency contraception is very poor viz. 8% in urban women, measly 3% in rural women and ridiculous 30% amongst gynaecologists (Bhatt 1998). What is currently known as emergency contraception has been variously labelled from time to time as morning after pill, postcoital pill, postcoital contraception, Yuzpe regime, postovulatory contraception, interception, visiting pill, vacation pill etc. over the last 25 years. Emergency contraception includes all current methodologies of preventing pregnancy following unprotected sex and hence is the most preferred term. Incidentally, postcoital contraception is an age old concept. Egyptian papyri have described preparations for the purpose 4000 years back. Tribals all over the world have been practicing postcoital contraception in their own way. Folk methods include violent shaking of lower body for expelling semen approved even by Soranus, pepper pessaries and postcoital douches with caustics, wine, vinegar, lemon juice, alum, carbonated soft drinks etc. Our modern methods aim at preventing implantation of fertilized ovum, presuming that fertilization has occurred, by delaying its passage through the tubes and rendering the endometrium unsuitable for implantation. Use of hormones can also prevent ovulation.

Postcoital IUCD for preventing pregnancy after unprotected sex was recommended by both Lippes and Tatum. It is effective when inserted within 5 days of intercourse. It is ideal when hormones are contraindicated and particularly when continuous future contraception is needed. It is highly efficient but cannot be used if genital and pelvic infection is present. Many would avoid it in young nulliparae for fear of possible impairment of future pregnancy but if prefered in them, a size compatible with their uterine cavity need to be used.

Estrogen and progestogens, alone or in combination can be used for emergency contraception, but they must be started within 72 hours of coitus. Diethylstilbestrol 25 mg BD for 5 days though the first to

be used is used no longer. Ethinyl estradiol (EE) 5 mg daily in divided doses for 5 days or conjugated estrogens 30 mg daily in divided doses for 5 days were also used in late seventies. Estrogens alone are no longer used because of their side effects like nausea, vomiting, menstrual disturbance, higher failure rate and teratogenicity.

Combined estrogen and progestogen in the form of combination oral contraceptive (COC) pills is in use since early eighties as Yuzpe-method. Over the years COCs have changed in their quantum of EE and type of progestogen used. But the dosage for emergency contraception is unchanged at 100 μg EE and equivalent of 0.5 mg levonorgestral (LNG) to be taken within 72 hours of coitus and repeated after 12 hours. Usual recommendation for standard OC pills is 2 BD, for low dose ones 4 BD and for pills with 20μg EE 5 BD. It may be added that 80 mg of mestrenol is equivalent to 50 μg EE. COCs are cheaper than estrogens, are easily available, need only two doses and carry lower failure rate.

Today, progestogens alone are prefered as they have minimal side effects. They are an obvious choice when EE is contraindicated. LNG 0.75 mg should be taken no later than 72 hours after coitus and repeated 12 hours later

Antiprogestogen, mifepristone (RU-486), an effective progesterone receptor blocker, interrupts endometrial hormonal support and prevents implantation. Hence it can be used for emergency contraception in a single dose of 600 mg. (Webb et al, 1992). It can even be given upto 120 hours after coitus. Even 50mg is shown to be effective. Mifepristone is possibly the most effective method with the advantage of needing only a single dose but carries a disadvantage of delayed menses in about one thirds of women causing much anxiety.

GnRh antagonists can be used for emergency contraception by virtue of their antigonadotrophic action, but they are too expensive.

There are mixed reports about the effectiveness of danazol given in two doses of 400mg 12 hours apart.

Lastly, if a woman presents too late for emergency contraception she can have menstrual regulation by Karman cannula but being a surgical procedure this is not considered as a method of emergency contraception.

Indian data on emergency contraception and its efficacy are awfully inadequate. Available data, Indian and overseas, are often difficult to interprete as regards failure rate. If one presumes that a single coitus around ovulation has 25% chance of pregnancy while a single coitus at any time irrespective of ovulation has 8% chance of pregnancy and use of emergency contraception after a single coitus results in 2% pregnancy what is the failure rate ? Is it just 2%, 25% (2 instead of 8) or 8% (2 instead of 25) ? Incidentally, Hatcher et al (1988) estimate that a single coitus at midcycle carries about 14% chance of pregnancy. Hatcher et al (1997) state that a single sex in 2nd or 3rd week of the cycle carries 8% pregnancy risk which is reduced to 2% by use of emergency contraception. Bhatt (1998) found 5.8% pregnancy with coitus in safe period as against 38% in unsafe period. He concludes that so called safe period is a myth. When he used emergency contraception (100 μg EE with 1 mg LNG given within 72 hours of coitus and repeated after 12 hours) 9.6% had pregnancy when coitus was during unsafe period and 8.6% when it was during safe period. He stated failure rate to be 9.3% (5 pregnancies in 54). However, based on his own data 31 women who had intercourse in unsafe period should have had 38% or 12 pregnancies without emergency contraception which prevented only 9 of these pregnancies, a failure rate of 25%, while emergency contraception had no value if intercourse was in safe period. His findings are akin to those of Hatcher et al (1997). All said and done emergency contraception is highly effective and avoids many MTPs.

There is undisputed need for creating awareness about emergency contraception, especially about the necessity of giving it at the earliest within 72 hours of coitus, among lay public, paramedical workers and even medical profession including gynaecologists. We must sensitise and educate medical profession at all levels regarding emergency contraception, various options available for it and most importantly the necessity of proper counselling of women opting for it.

Counselling must include :-

1) Information about side effects
2) Use of antiemetics half an hour before intake of pills
3) Need to repeat the pills if vomiting occurs within two hours of taking pills.
4) Possibility of failure
5) In case of failure
   a. Probability of tubal pregnancy (10% of resultant pregnancies according to some)
   b. Teratogenicity
   c. Availability and need for MTP
6) Menses may come earlier, may be delayed (suspect pregnancy) or may be very painful (suspect tubal

pregnancy)

7) Mandatory follow up
8) Delay or disturbance of next menses
9) Emphasizing that, barring IUCD, other methods of emergency contraception cannot be used as a substitute for regular contraception since they lack requisite efficacy and carry a high failure rate. Emergency contraception is essentially a 'one time use contraceptive only'.

Finally, with increasing awareness the demand for emergency contraception services is bound to increase. Hence, all family welfare centres and health care services should be able to provide emergency contraception coupled with adequate counselling and facilities for MTP when emergency contraception fails.

References

1. Bhatt RV. Obstet Gynecol today; 3 473, 1998
2. Hatcher RA., Guest F., Stewart F Contraceptive Technology, Irvington Publisher, New York 1988
3. Hatcher RA., Rinehart W , Blackburn R., Geller JS. The Essentials of Contraceptive Technology Johns Hopkins Population Information Program. Baltimore 1997.P 5 – 20.
4. Webb AMC., Russell J., Elstein M. BMJ 305. 927, 1992

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