

# Perspectives of Emergency Contraceptives in India

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## Abstract:

India has the highest number of unsafe abortions. About one third of the abortions are unsafe. Emergency Contraception provides the last option to the women to avoid unwanted pregnancy. Emergency contraceptives are highly effective if consumed within 72 hours after the intercourse. They provide best effect when consumed as closest to the intercourse. There are various advantages of Emergency contraceptives specifically as they does not require any medical surgery and intervention as compared to IUD's and Copper T but all long term health effects of Emergency contraceptives are still unknown and needs to be explored. They are most popular form of contraception being used by young people. Emergency contraceptives are used to prevent adolescent pregnancies. Therefore, there is high need to aware the population about long term effects of Emergency contraceptives. This review focusses on the various aspects of Emergency contraception, mechanism of action, methods of emergency contraceptives, advantages, side effects, and recommendations.

**Keywords:** Emergency Contraception, Post coital contraception, Morning After pills

## INTRODUCTION

Emergency contraception is any method which is used after intercourse and before the potential time of implantation. This nomenclature, advocated by WHO lately. It is accepted by International Advisory Panel and others recently. Emergency contraception also referred to as post coital contraception is the most desired therapy for the ultramodern life. It is definitely a boon to the couples who do not want to have unplanned pregnancies. It is safe and effective method to prevent unwanted pregnancies. If this type of treatment is not available, all the unwanted pregnancies would have ended up in unsafe abortion, which would have cause high threat to women's health. But if we look at Indian market, somewhere down the line, the concept of emergency contraceptive is fading and now it is emerging as a new method of contraception. People are using them indiscreetly as a regular form of contraception, because of which now it is posing a threat on long term basis. There are number of emergency contraceptives

available in Indian market. Indian is third largest market for Emergency contraceptives after US and china being 1st and second respectively. As per the latest market research on emergency contraceptive in July 2013, By Euromonitor International, Emergency contraception in India increased by 24% in current value terms in 2012.

## Over the Counter – Emergency Contraceptives

Emergency Contraceptives are provided the OTC status in many countries including India. There is no point to give them prescription drugs, since there are no medical reasons.(1) Due to OTC status, the physicians and other health care provided are not able to do proper counselling of the patients and henceforth, the regular and long term contraception methods are not widely used. Emergency contraceptives should be used only as last option and not as a first option.

**Table 1: List of EC's Available in Indian Market**

EC	Company	Price	Drug	Mode
<i>i-pill</i>	Cipla	Rs 75	Levonorgestrel	Single pill
<i>Unwanted 72</i>	Mankind Pharmaceuticals	Rs 199	Levonorgestrel	Single pill
<i>Preventol</i>	Hill Lifecare Limited	Rs. 50	Levonorgestrel	Two pill
<i>Truston 2</i>	V care Pharma Limited	Rs. 60	Levonorgestrel	Two pill
<i>Nextime Pill</i>	-	Rs 49	Levonorgestrel	Single pill
<i>Clr-72</i>	Vardhman Life care pvt. Ltd .	Rs.78/-	levonorgestrel	Single pill
<i>Tpill-72</i>	-	Rs. 69/-	Levonorgestrel	Single pill
<i>No-will pill</i>	-	Rs. 75/-.	Levonorgestrel	Single pill

**Mechanism of Action**

ECPs mainly stop ovulation (release of eggs from ovary) just as OCs taken daily do, but it is likely that there are other mechanisms involved too, such as (2):

1. Inhibition or delay of ovulation
2. Thickening of cervical mucus
3. Direct inhibition of fertilization Histological and biochemical alteration in endometrium leading to impaired endometrial receptivity to implantation of the fertilized egg
4. Alteration in transport of egg, sperm and embryo
5. Interference with corpus luteum function and luteolysis

**Methods of Emergency Contraceptives**

According to the National Reproductive and Child Health Programme, the Drug Controller of India has only approved Levonorgestrel (LNG) 0.75mg tablets for use as ECP. LNG is the 'dedicated product' for emergency contraception and is specially packaged at the correct dosage for use as ECP. This product does not require prescription from a registered medical practitioner. All the hormonal oral contraceptive pills (combined as well as single) in varying doses and IUCDs can be used for EC. The following methods are in use (3):

- High doses of progestogen only pill containing levonorgestrel (LNG)
- High doses of combined oral contraceptive containing ethylestradiol and levonorgestrol (Yuzpe regimen)
- Copper releasing intrauterine devices (IUCD) such as CuT 380A

**Effectiveness**

It is calculated in two ways (4)

- a) Overall Pregnancy rate Which is calculated by dividing number of failures/ 100 of women.
- b) Prevented fraction of pregnancies  

$$\frac{\text{No. of expected pregnancies} - \text{no. of observed pregnancies}}{\text{No. of expected pregnancies}} \times 100$$

Number of expected pregnancies is calculated by probability of conception based on the cycle day of the menstrual cycle at the time of sexual exposure. Most women having single unprotected intercourse will not conceive, but it is difficult to identify fertile days.

**Price effectiveness:**

Emergency Contraceptives are definitely cheap alternatives as compared to other methods of contraception such as IUD's and Copper -T, which also adds up insertion cost and therefore, is not a cost saving option.

**Advantages (3)**

1. Safe and effective
2. Easy to use and widely available
3. Can be taken at any time during the monthly cycle
4. A physical examination is not required
5. It is available without a prescription from registered medical practitioner
6. Can be given to women for whom use of hormonal contraceptive pills are contraindicated
7. Can be used as many times as needed; although not a substitute for regular contraceptives

8. No serious medical complications reported
9. Doses of hormones are relatively small
10. Short exposure does not have any metabolic effects
11. Use not associated with fetal malformations/congenital defects
12. Does not increase the risk of ectopic pregnancy

**Side effects**

Nausea and vomiting, abdominal pain, breast tenderness, headache, dizziness, and fatigue Side effects usually do not occur for more than a few days after treatment, and generally resolve within 24 hours. Temporary disruption of the menstrual cycle is commonly experienced. If taken before ovulation, the high doses of progestogen may induce progestogen withdrawal bleeding a few days after the pills are taken. If taken after ovulation, it may increase the length of the luteal phase, thus delaying menstruation by a few days. Mifepristone, if taken before ovulation, may delay ovulation by 3-4 days (5)

**Only Progesterone pills :**

It contains only progesterone Levonorgestrel as a Emergency contraception pill. It is a successful and more efficient tool for postcoital contraception. LNG is widely accepted and considered more efficient as compared to combination drugs treatment. It definitely reduces the risk of an unwanted pregnancy. LNG prevented about 8% of pregnancies compared with the expected number without treatment (10).

**RECOMMENDATIONS:**

None of the methods of the contraceptives is 100% effective. Unwanted pregnancy is social stigma not only for the society but also carries huge responsibilities. Therefore, there is the need that the regular methods of contraceptions should be trained and made aware to the society so that the need for Emergency contraception is reduced. At the same, emphasis should be provided for improvisation of the existing methods of the contraception. Since Emergency contraception directly disturbs the hormonal balance, therefore, it should be avoided as far as possible and should be considered only as last option for prevention of unwanted pregnancies. Emergency contraceptives should be used as backup plan.

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