

## UNIT-5

### INTRAUTERINE DRUG

### DELIVERY SYSTEM

Points to be covered in this topic

→ □ INTRODUCTION

→ □ ADVANTAGES

→ □ DISADVANTAGES

→ □ DEVELOPMENT OF INTRAUTERINE  
DEVICE

→ □ APPLICATIONS

### ### INTRAUTERINE DRUG

### DELIVERY SYSTEM

#### □ INTRODUCTION:

- New intrauterine drug delivery products, which are designed to provide improved methods for the prevention and treatment of gynecological conditions, improvements to birth control methods, and higher levels of safety, user acceptability, compliance, and quality of life for women.

The development of frameless intrauterine systems is such an attempt to improve on the performance and acceptability of established intrauterine contraception.

An intrauterine drug delivery system (IUDDS) is used for the controlled release of a drug having progestogenic activity over a prolonged period of time and at a level required for contraception.

It is a small object that is inserted through the cervix and placed in the uterus to prevent pregnancy.

A small string hangs down from the IUD into the upper part of the vagina.

- The IUD is not noticeable during intercourse.

- IUDs can show pharmacological efficacy for about 1-10 years.

- They work by changing the lining of the uterus and fallopian tubes affecting the movements of eggs and sperm and so that fertilization does not occur.

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#### □ ADVANTAGES

✓ They are more than 99 per cent effective in preventing pregnancy.

✓ They last for a long time.

✓ They are safe to use if you are breastfeeding.

✓ No medications stop them from working.

✓ It provides another contraceptive choice if there is difficulty taking the hormone oestrogen.

✓ There is no vaginal bleeding at all or a light regular period after use.

#### □ DISADVANTAGES

✓ It does not protect against sexually transmitted infections (STIs).

✓ IUDs are not useful if a uterus that is not the usual shape and pelvic infection.

✓ It is not suitable in case of heavy periods, low iron levels, and endometriosis.

✓ It may increase the likelihood of ectopic pregnancy.

✓ There are risks during insertion and removal.

✓ IUDDS may cause systemic contraindications like copper allergy, immunodeficiency disorders, immunosuppressive therapy, Wilson's disease, acute liver disease or liver carcinoma and breast carcinoma especially for hormonal IUD, multiple sexual partners for the patient or her partner.

#### □ DEVELOPMENT OF INTRAUTERINE DEVICE

- Intrauterine Device (IUD) is a small object that is inserted through the cervix and placed in the uterus to prevent pregnancy.

- IUD usually is a small, flexible plastic frame.

- A small string hangs down from the IUD into the upper part of the vagina.

- The IUD is not noticeable during intercourse.

- IUDs can last 1-10 years.

- They affect the movements of eggs and sperm to prevent fertilization.

- They also change the lining of the uterus and prevent implantation.

- IUDs are 99.2-99.9% effective as birth control.

- They do not protect against sexually transmitted infections, including HIV/AIDS.

- Insertion of an IUD takes only about 5 to 10 minutes.

#### Advantages

✓ It is inexpensive.

✓ It is highly effective in preventing pregnancy.

- ✓ It does not interrupt sex.
- ✓ It does not require partner's involvement.
- ✓ It can be used for a long period of time.
- ✓ It can be used as an emergency method of birth control.
- ✓ An IUD provides long-term contraception for 3 to 5 years and is cost effective.

#### Disadvantages

- ✓ It does not protect against sexually transmitted infections (STIs).
- ✓ It may increase the likelihood of ectopic pregnancy (pregnancy outside the uterus).
- ✓ It can cause heavier and more painful periods.
- ✓ Cramping and discomfort occurs during and 24-48 hours after insertion.
- ✓ There are risks during insertion and removal.

#### □ APPLICATIONS

- IUD is effectively useful in contraception similar or better than female sterilization. IUDs are safe to use for many years. They may even remain somewhat effective past their recommended end date. It provides long term contraception.
- For people with severe health conditions that make pregnancy dangerous, an IUD can be life-saving. IUD protects against pregnancy related health issues.

- IUDs can be safely placed immediately after abortion or 6 weeks postpartum with high contraceptive benefits. Copper IUD is recommended as the most effective option for emergency contraception.

- IUD benefit is the fact that it can be used as an adjunctive treatment modality for intrauterine adhesions. IUD can be beneficial in patients with intrauterine adhesions or Asherman's syndrome, especially when combined with other ancillary treatments.

- IUDs include the treatment of menorrhagia, anemia, dysmenorrhea and pelvic pain associated to endometriosis, and endometrial protection during hormone replacement.