Estrogens & Antiestrogens

Contraception

Reversible methods are followed to control births.

Exam Q
Oxytocin is usually given
Orally
IV
IV infusion...the correct answer

Cortisol has a problem when it uses as an anti-inflammatory drug for a long time because this affects the axis

Male hormonal contraceptive methods are considered to be not preferred methods because they end his sexual functions totally.

Vasectomy ligation of vas deferens prevent the passage of sperm to the penis

Mechanical contraceptive methods decrease the incidence of sexually transmitted diseases.

BEHAVIORAL : **Avoiding sexual intercourse when the female is highly fertile**

I. Male contraception:

1. Behavioral

2. Mechanical (e.g. condoms) ± spermicidal agent (nonoxynol-9)

3. Drugs

Estrogens; progestins; danazol; GnRH agonists & antagonists; spermicidal agents; gossypol

4. Surgical procedures e.g. vasectomy

Progesterone is used to decrease uterine and vaginal bleeding

II. Female contraception:

1. Behavioral

2. Mechanical

Diaphrams; condoms ± spermicidal agents;

IUD's ± progestins (progestasert)

3. Drugs

- Estrogen alone

Morning after pill or postcoital pill

Ethinylestradiol; DES; mestranol….. ×5

You must be careful when you use hormonal contraceptive because you give an external hormone that can distribute the normal axis.

10% of ladies that use contraceptive become infertile due to complete atrophy of cells

The size of mechanical contraceptive method should be taken into consideration

IVU (intrauterine device)is a device used in the uterus that changes the uterine wall preventing implantation of the zygote

Estrogen has more side effect than progesterone

Progesterone as mini-pills: start at day 5 of the menstrual cycle, even there is bleeding, and stop it at day 20, we stop it because we don't want to complete suppression of the axis

Combined oral contraceptive pills can have tertatogenic effects

- Progesterone alone

The minipill

* Norethisteron... Tab

* I.M medroxyprogesterone

Depo-provera (effect lasts in 3-6 months)

* Subdermal progesterone implants

Levonorgesrel (effect lasts in 5-6 years)

4. Sequential

Estrogen followed by progesterone

5. Combined oral contraceptive pills (COCP's)

Ethinyl estradiol or mestranol + Norgestrel

Ethinyl estradiol or mestranol + Norethisterone

*** Estrogen + progesterone in different ratios (lowest E highest P to achieve the lowest or zero failure rate) (monophasic; biphasic or triphasic birth control pills)**

- **Monophasic birth control pills have the same amount of estrogen and progestin in each active pill (1 tab for 21 days)**
- **Biphasic birth control pills change the level of hormones one time during the menstrual cycle. During the first half of the cycle, the estrogen/progestin ratio is usually higher (1 tab for 7-10days). During the second half of the cycle, the estrogen/progestin ratio tends to be lower (1 tab for the next 11-14days)**
- **Triphasic birth control pills contain three different doses of hormones so the hormone combination changes approximately every seven days throughout the cycle (1 tab E>P daily for 7 days; 1tab E=P for the next 7 days; 1tab E< P for the last 7 days)**

- Inhibition of ovulation (major mechanism)

At the level of the pituitary

- ↑ viscosity of cervical mucus
- Change in Fallopian tube motility

- **MOA of OCP's:**

- **OCP's side effects:**

- Nausea, vomiting, dizziness, headache, migraine, nervousness, depression

- Salt & water retention → ↑ BP

- Thromboembolic disease, embolism, MI

- Vaginal yeast growth

- Postpill amenorrhea and infertility

- **OCP's contraindications:**

- History of thromboembolic disease

- Severe headache

- Severe nausea & vomiting

- Liver dysfunction

- Pregnancy

- Abnormal menstrual cycles

- **OCP's drug-drug interactions:**

- Drugs inhibiting enterohepatic circulation

Ampicillin; cephalosporins; teracyclines; sulfonamides; co-trimoxazole

- Drugs ↑ metabolism

Phenobarbitone; phenytoin; ethosuximide; rifampicin; griseofulvin…

- Miscellaneous interactions

+ anticoagulants →↓ activity of anticoag. + insulin → ↑ insulin need