

Unit IV – Problem 7 – Pharmacology: Hormone Therapy



- Introduction:

- Menopause is a natural life phenomenon (40 ± 5 years). Hormonal changes occur representing the end of the reproductive life of a female and resulting in other effects on the body. Notice that not all females require hormonal therapy when they reach menopause.
- The aim of the treatment is to control signs and symptoms of menopause. In the past, estrogen was used alone but increased risk of cancer was noticed and to prevent this progestins were added.

- Hormone therapy:

- Hormone therapy has only one strong indication that is: acute symptoms of menopause (why?) → because hormonal therapy has many other complications. Hormone therapy also has benefits in preventing osteoporosis and bone fractures.
- Why the term hormone replacement therapy is not used nowadays?
 - ✓ Because estrogen which is depleted in menopausal women does not need to be replaced.
- Therapy is individualized: only (estrogen) or (estrogen + progestin).

- Menopause:

- It can be physiological/ natural or induced (e.g. removing the ovaries).
- Symptoms of menopause usually appear gradually and include the following:
 - ✓ Hot flushes (lasting for few minutes to hours. They occur suddenly at any time).
 - ✓ Urogenital changes (dryness).
 - ✓ Sleep disturbances (insomnia).
 - ✓ Emotional changes (depression).

- Drugs:

- Estrogen and progestins mainly. Add androgens only if a woman is concerned with loss of libido (androgens will restore it).

- Administration of drugs:

- **Estrogen:** oral, cream, subcutaneous.
- **Progestin:** oral, vaginal pessaries.

- Regimens:

- **Estrogen + progestins (if uterus is present):** combined (every day: no bleeding occurs), or cyclic (estrogen everyday, progestins only in the end of the cycle: last 2 weeks and this will result in bleeding).
- **Estrogen alone (if uterus is not present):** may result in cancer (increased risk of cervical and breast cancers).

- Toxicities:

- Malignancy (breast cancer, endometrial cancer) and venous thromboembolism.

- Benefits:

- Reverse of menopause symptoms.
- **If there are no benefits or effects after 6 months:** it could be because of incorrect diagnosis, dosage, poor absorption & drug interaction (with barbiturates).

- Contraindications:

- Myocardial infarction, history of thromboembolic disorders, breast or endometrial cancer, liver disease.

- Non-estrogen therapies:

- **Tibolone:** is metabolized to 3 compounds with estrogenic, progestogenic & androgenic effects. It prevents osteoporosis & incident of bleeding is lower than HT.
- **Raloxifen:** a selective estrogen receptor modulator. Results in decreased risk of CVD, osteoporosis and breast cancer and has less bleeding than HT.

Note: complementary & alternative medicine is also used such as soy products and others...