

Menopause

Definition

- A physiological loss of ovarian hormonal activity
- Closely allied to loss of reproductive potential
- Permanent cessation of the primary ovarian functions

Physiology

The Ovaries

- 2 functions - produce ova & secrete hormones
- Start secreting estrogen & progesterone from puberty to menopause
- Most of the beneficial effects derive from estrogen

Actions of oestrogen

- Formation of the 20 sex characteristics
- Develop ovaries, tubes, uterus & vagina
- HPO axis interaction
- Endometrial proliferation
- Increases fat deposition
- Maintain the skin & vessels
- Bone - increase formation & reduce resorption

Actions of progesterone

- Its actions are amplified in the presence of estrogen
- Interacts with hypothalamus and pituitary to regulate menstrual cycle
- Converts endometrium to secretory stage
- Makes cervical mucous & vaginal epithelium impenetrable to sperm
- Inhibits lactation during pregnancy
- Makes the uterus less contractile

When does menopause occur?

- Tends to occur over a period of years
- A consequence of biological ageing
- Genetic & environmental factors

Types of menopause

- **Premature Menopause** - menopause in a woman aged <40 years
- **Early Menopause** - menopause in a woman aged 50 - 59 years
- **Late Menopause** - menopause in a woman aged >60 years
- **Surgical menopause** - a result of surgical removal of both ovaries
- **Medical menopause** -
 - **permanent** damage to both ovaries - chemotherapy or radiotherapy
 - **temporary** - GnRHa tx in endometriosis

Perimenopause

- The time just before and soon after the occurrence of menopause
- Symptoms of menopause have started
- Not yet certain if menopause is established yet.

Diagnosis of menopause

The diagnosis of menopause is mainly clinical

- a. Clinical Criteria

1. age around menopause (around 50 years)

2. no periods for 12 months

3. menopausal symptoms

(NB. All 3 clinical criteria need not be present for a diagnosis)

- b. Laboratory diagnosis is generally not necessary for the diagnosis of menopause. However, where in doubt, laboratory testing of FSH may support the diagnosis, viz

- b. Laboratory Criterion

1. FSH level > 35miu/ml

Primary symptoms

Menstrual changes

- Abnormal - Oligoamenorrhea - amenorrhea

Vasomotor

- hot flashes, night sweats

Urogenital

- Vaginal dryness, micrurition altered

Secondary symptoms

Physical symptoms

- Muscle & joint pains
- Skin dryness, decreased stamina, backache

Sexual

- Decreased libido
- Avoiding intimacy

Psychophysiologic changes

- Decrease concentration
- Depressive symptoms

Long term effects

- Cardiovascular
- Bone
- Cancers
- Cerebrovascular

Clinical implications of menopause

Minor conditions

- Urinary tract infections
- Vaginal dryness
- Vaginal infections
- Joint & muscle pains

Perimenopausal abnormal bleeding

- At this age, there are many conditions that peak
- e.g. Adenomyosis, polyps, fibroids, hormonal
- Cancers are always a concern, esp Ca Cx
- Infections are the most common occurrence
- All these must be ruled out before a diagnosis of perimenopausal bleeding

Postmenopausal bleeding

- Consider it as always abnormal
- Always think of cancer
- Usually due to atrophy or infection

Cardiovascular disease

- CV risk increases as estrogen levels decline
- 1 in 2 women will die from cardiovascular disease
- Estrogen exerts beneficial effects on CV system through
 - o Direct effect on the vasculature
 - o Indirect effect of lipid metabolism

Cholesterol metabolism

“Only total cholesterol, low-density lipoprotein cholesterol, and apolipoprotein B demonstrated substantial increases within the 1-year interval before and after the FMP, consistent with menopause-induced changes.

Fracture risk

- Decreased bone density
- Osteoporosis
- Common fractures involve hip, forearm & spine

Psychomotor & Mental

- loss of libido
- suicidal tendencies
- marital discord

Potential risks & concerns

- Breast cancer
- Cardio vascular disease
- Venous thrombosis
- Endometrial cancer
- Compliance/therapy

Current recommendations

- hormone therapy should be initiated for the treatment of menopause-related symptoms
- the lowest dose should be used for the lowest duration
- 5 years recommended for estrogen+prog therapy

hormone therapy risks

- all forms of tx increase risk of VTE (deep vein thrombosis & pulmonary emboli)
- increased risk of breast Ca with est+prog combination