Obstetrics & Gynaecology - Topic 32 - Menopause

Physiology of Menopause

Definitions

Natural Menopause and the Transition

- Natural menopause is recognised after **12 consecutive months without menstruation** when no other physiological or pathological cause explains the absence of periods.
- The final menstrual period is identified retrospectively, while perimenopause describes the transition around it.
- Menopause is a normal life transition, but its symptoms and health consequences may need treatment.

Surgical Effects and Early Ovarian Insufficiency

- Hysterectomy without removal of the ovaries stops uterine bleeding but does not necessarily cause immediate ovarian menopause.
- Removal of both ovaries before natural menopause causes an abrupt surgical menopause, which may produce more sudden symptoms.
- Menopause before age 45 is considered early, while loss of ovarian activity before age 40 requires assessment for premature ovarian insufficiency.

Hormonal Changes

Ovarian feedback during the menopausal transition

Declining ovarian follicle number and responsiveness

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Falling inhibin and weakening ovarian feedback

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FSH rises

Oestradiol fluctuates during the transition; one hormone result can mislead

Follicular Decline and Hormonal Feedback

- The number and responsiveness of ovarian follicles decline with age, leading to less reliable ovulation during the transition.
- Inhibin falls and FSH rises as ovarian feedback weakens, while oestradiol can fluctuate considerably before remaining lower after menopause.
- After menopause, peripheral conversion of adrenal androgens becomes an important source of circulating oestrogens, particularly oestrone.
- FSH usually rises more than LH because reduced inhibin removes an additional restraint on FSH secretion.

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Bleeding, Test Variability and Systemic Effects

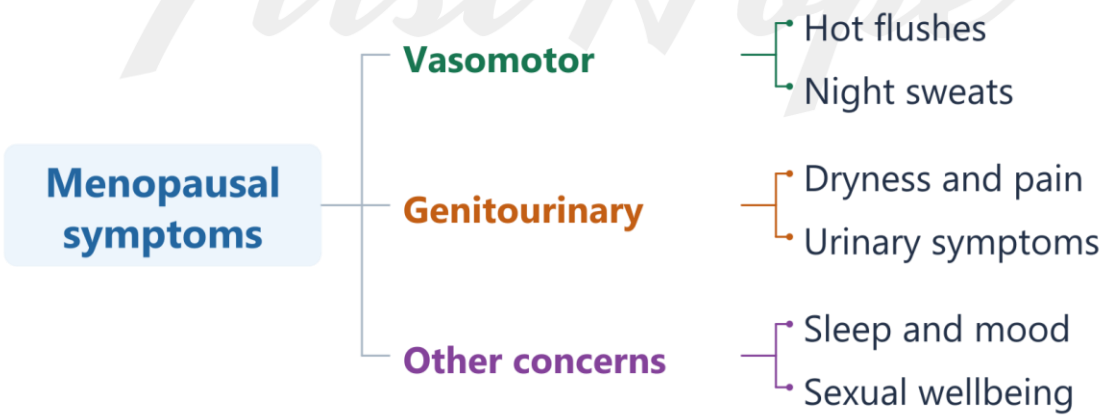
- Progesterone exposure becomes irregular when ovulation fails, contributing to changes in cycle length and bleeding.
- A single hormone result during perimenopause may therefore be misleading.
- Reduced oestrogen affects thermoregulation, vaginal and urinary tissues, bone turnover and several other systems.

Making the Diagnosis

- In a person aged 45 or older with a typical menstrual and symptom pattern, menopause is usually diagnosed clinically without routine hormone tests.
- FSH testing can help in selected younger patients or when the diagnosis is unclear, but combined hormonal contraception and some treatments limit interpretation.
- Exclude pregnancy when relevant and consider thyroid disease, anaemia, medicine effects or other causes of apparently menopausal symptoms.
- Unexplained heavy, intermenstrual or postmenopausal bleeding should be assessed separately rather than labelled a normal hormonal change.

Symptoms and Health Effects

Symptom Domains of Menopause



1. Vasomotor Symptoms

- Hot flushes are sudden episodes of warmth, often affecting the face and upper body, with flushing or sweating.
- Night sweats can interrupt sleep and contribute to tiredness, poor concentration and reduced quality of life.
- Persistent fever, unexplained weight loss or atypical drenching sweats should prompt assessment for other illnesses.

2. Sleep, Mood and Cognitive Concerns

- Sleep disturbance, irritability, anxiety and difficulty concentrating may occur during the transition.

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- Assess depression, significant anxiety and suicide risk when indicated rather than assuming all emotional symptoms are hormonal.
- Memory complaints deserve a proportionate assessment, particularly when they are progressive or interfere substantially with daily function.

3. Genitourinary Syndrome of Menopause

- Lower oestrogen can make vulvovaginal tissues thinner, drier and less elastic, causing irritation or pain with intercourse.
- Urinary urgency, frequency and recurrent urinary infection may accompany these changes.
- These symptoms can persist or worsen without treatment, unlike some vasomotor symptoms that improve over time.
- A visible lesion, persistent discharge or bleeding needs evaluation before treatment is attributed solely to atrophy.

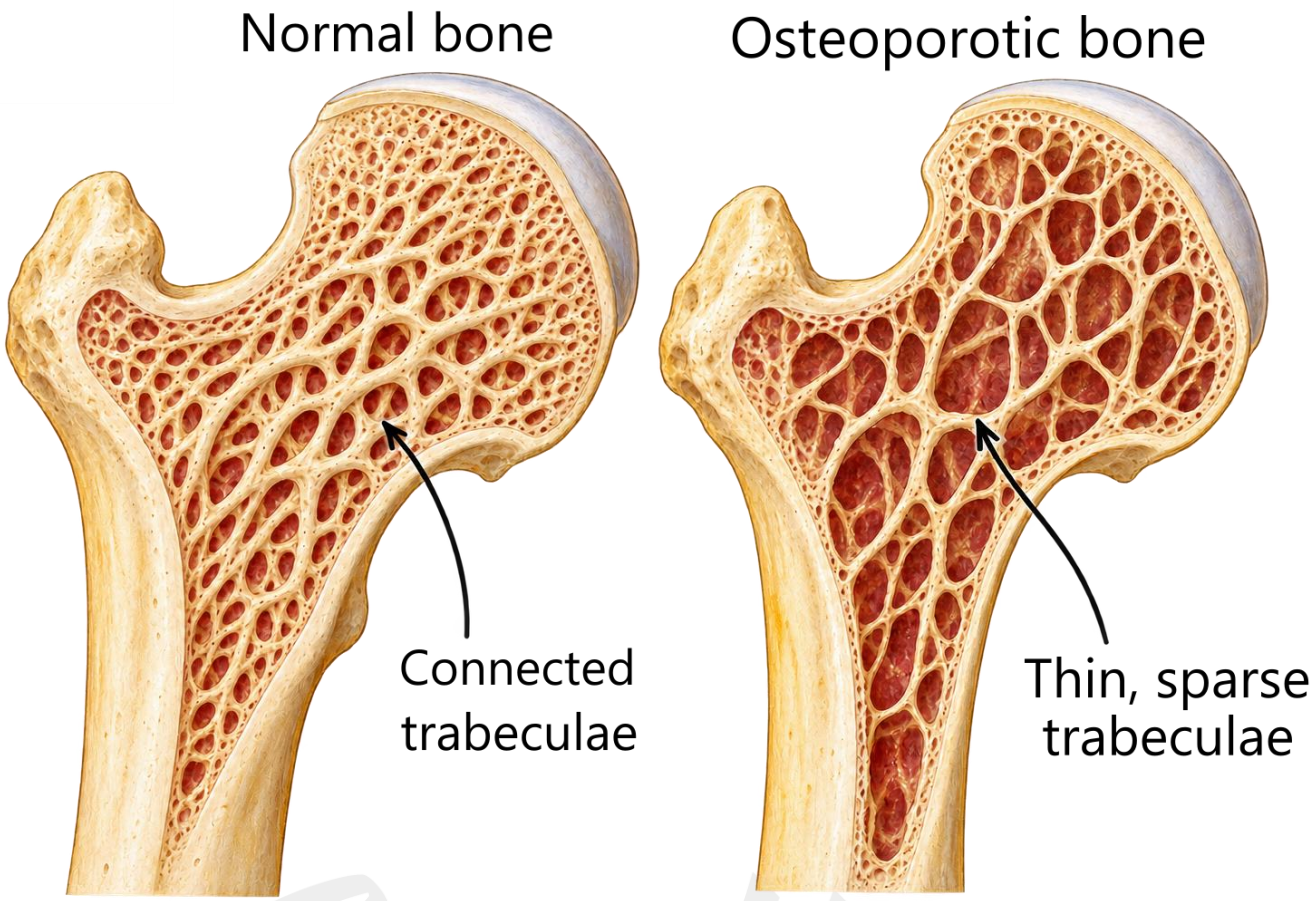
4. Sexual and Musculoskeletal Effects

- Pain, sleep problems, relationship factors, medicines and hormonal change can all affect sexual wellbeing.
- Joint or muscle discomfort may occur, but focal swelling, weakness or inflammatory symptoms require assessment for another cause.
- Ask about concerns sensitively and avoid assuming that every patient wants the same type of treatment.

Bone and Cardiometabolic Health

- Reduced oestrogen increases bone resorption, which can accelerate bone loss and contribute to fragility fractures.
- Age, smoking, low body weight, glucocorticoids, previous fractures and family history also influence fracture risk.
- Assess fracture risk and arrange bone-density testing when age or clinical risk warrants it, rather than scanning everyone solely because menstruation has stopped.
- Blood pressure, glucose, lipids, smoking and physical activity remain important targets for cardiovascular prevention.
- Menopausal hormone therapy should not be started solely to prevent cardiovascular disease or dementia.

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Loss of trabecular connections contributes to fragile bone; menopause is one of several influences on fracture risk

Supportive and Non-Hormonal Care

Health Promotion

- Explain the expected transition and support practical changes to sleep, clothing, cooling and avoidance of personally recognised flush triggers.
- Encourage regular physical activity, resistance and weight-bearing exercise, balanced nutrition and smoking cessation.
- Ensure adequate dietary calcium and vitamin D according to individual needs, and use supplements when intake or deficiency assessment indicates them.
- Address fall risks, alcohol excess and medicines that contribute to dizziness or bone loss.
- Continue age-appropriate cervical, breast and other screening rather than treating menopause as the end of preventive care.

Symptom-Specific Options

Psychological and Established Non-hormonal Options

- Menopause-specific cognitive behavioural therapy can help with vasomotor symptoms, sleep difficulties or associated distress.
- Selected SSRIs or SNRIs and gabapentin can reduce vasomotor symptoms when hormone therapy is unsuitable or not preferred.

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- Choice depends on comorbidity, interactions and adverse effects; for example, sedation may limit gabapentin and some antidepressants interact with tamoxifen.

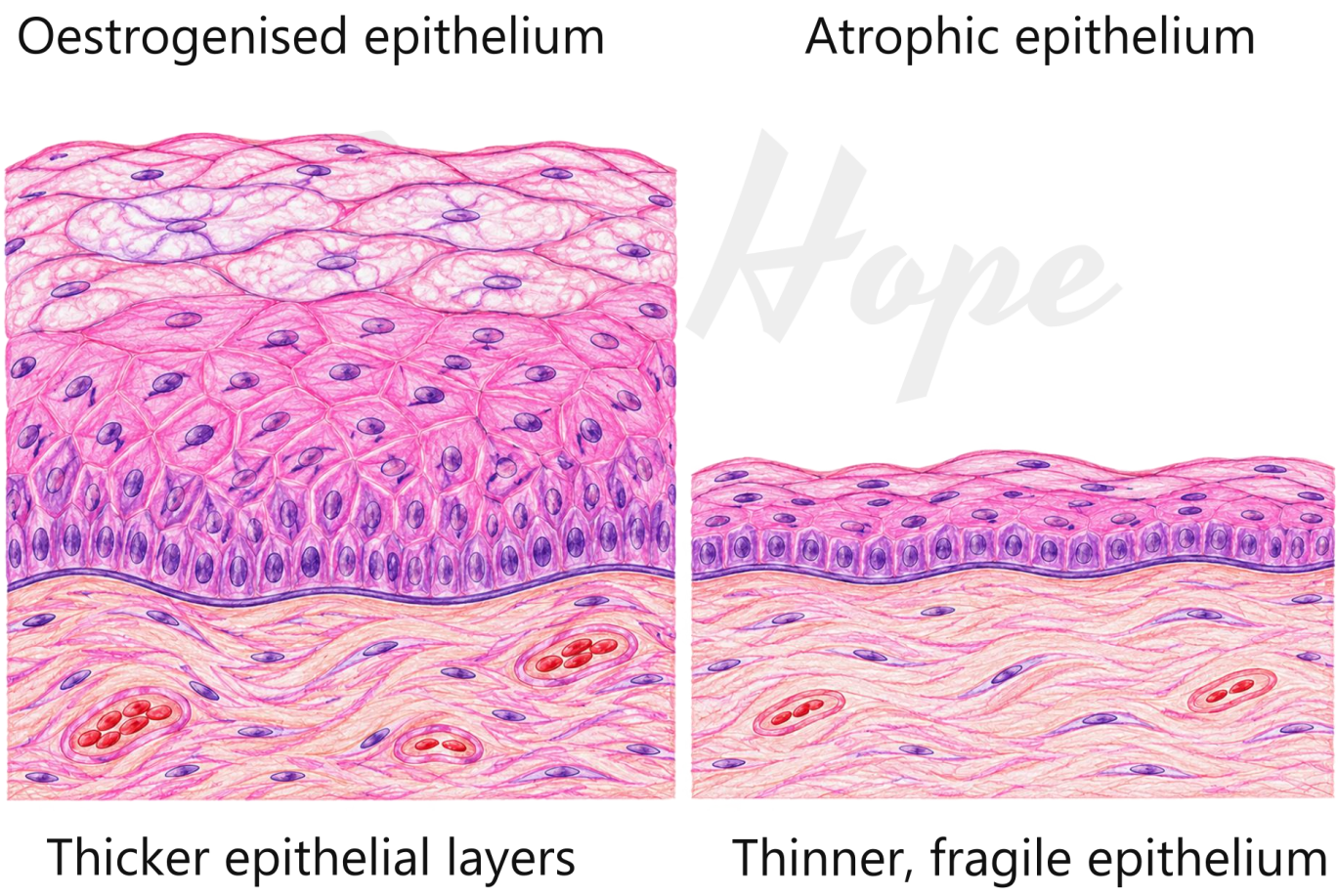
Fezolinetant Monitoring and Product Safety

- Fezolinetant is a non-hormonal neurokinin-3 receptor antagonist available in some settings, but it requires assessment of liver risk and local prescribing approval.
- Its current prescribing precautions include liver tests before treatment, monthly during the first three months, and again at months six and nine.
- New jaundice, dark urine, marked itching or other symptoms of liver injury require stopping the medicine and prompt clinical review.

Unregulated Preparations and Evidence Limits

- Unregulated hormone mixtures and herbal products should not be assumed safe simply because they are described as natural.

Local Genitourinary Treatment



Reduced oestrogen can thin the vaginal epithelium and contribute to genitourinary symptoms at menopause

- Vaginal moisturisers used regularly and lubricants used during sexual activity may reduce dryness and friction.
- Low-dose vaginal oestrogen is useful for persistent menopausal genitourinary symptoms and has much less systemic exposure than systemic treatment.
- A progestogen is generally not required solely for standard low-dose local vaginal oestrogen, but any bleeding still requires assessment.

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