PATHOLOGY & PATHOPHYSIOLOGY

DISORDERS OF THE FEMALE REPRODUCTIVE SYSTEM
MENSTRUATION TERMINOLOGY

- **Menarche**: Appearance of first menstruation
- **Menorrhagia/menorrhoea**: Excessive flow of menses
- **Amenorrhea**: Has never menstruated or menstruation stopped due to disease/pregnancy
- **Dysmenorrhea**: Pain or discomfort during or just before menstruation
- **Menopause/climacteric**: No menstruation for 1 year
CANDIDIASIS

- **Causative organism:** *Candida albicans* (a yeast)

- Normal commensal organism of the GIT and genital tract. Candidiasis is an overgrowth of this organism.

- **Predisposing factors:** Pregnancy, immunosuppressive treatment, antibiotics, corticosteroids, OCP, chronic iron deficiency, chronic folic acid deficiency, HIV, AIDS
CANDIDIASIS

- Signs and symptoms of vaginal candidiasis:
  - Thick white discharge that does not have an offensive smell
  - Dyspareunia
  - Itching
  - Inflamed tender vagina and vulva
  - Burning micturition
CANDIDIASIS

- Partner may be infected and therefore cross infection can occur
- Mother and baby may also cross infect each other
- May spread from GIT
- **Diagnosis**: Vaginal swab – look under the microscope for organism
- **Treatment**: Antifungals
CANDIDIASIS

- Complementary treatment:
  - Avoid foods containing sugar and yeast
  - Avoid fermented foods such as alcohol, soy sauce, vinegar
  - Avoid mushrooms
  - Wear cotton underwear
  - Avoid household chemicals
CANDIDIASIS

- Supplements:
  - Acidophilus
  - Caprylic acid
  - Grapefruit seed extract
  - EFA
  - Garlic
  - Olive leaf extract
  - Pau d’arco and maitake tea
  - Clove tea
  - Wild oregano oil
PREMENSTRUAL TENSION/PREMENSTRUAL STRESS

- Symptoms start 1 to 2 weeks before menstruation and improve during menstruation

- Signs and symptoms:
  - Water retention
  - Painful breasts
  - Abdominal bloating
  - Nausea
  - Pain and stiffness of back/head
  - Mood changes, irritability, depression
  - Dizziness, fainting, cold sweats
  - Loss of concentration
PREMENSTRUAL TENSION/PREMENSTRUAL STRESS

- Complementary therapies: Vitamin B6, magnesium, evening primrose oil, diuretics, salt free diet, decrease stress
DYSFUNCTIONAL UTERINE BLEEDING

- **Definition:** Heavy, frequent or irregular menstruation due to a problem with the hormones that control menstruation (gonadotropin releasing hormone, FSH, LH, oestrogen and progesterone)

- **Aetiology:**
  - Not ovulating
  - Bleeding disorders
  - Hormonal imbalances
DYSFUNCTIONAL UTERINE BLEEDING

- During the first 6 years after menarche a female can have many anovulatory cycles
- Before menopause there are also many anovulatory cycles
- Other women tend to ovulate 80% of the time
DYSFUNCTIONAL UTERINE BLEEDING

- **Treatment:**

- Teenagers: It is quite normal - wait approximately 6 years from age of menarche

- Adults: Oral contraceptives can be used to keep cycles constant

- Peri/post-menopausal women: It is very important to exclude structural causes such as endometrial cancer

- Hysterectomy
AMENORRHEA

- 2 types: Primary and secondary

- Primary: Non-appearance of menarche by age 16

- Secondary: No menstruation for 6 months when patient had normal bleeding prior to this
AMENORRHEA

- **Aetiology:**
  - Pregnancy
  - Disorder that obstructs the outflow, tumours
  - Ovarian failures
  - Stress
  - Anorexia nervosa
  - OCP
  - Medicine
  - Thyroid disorders
  - Adrenal disorders (e.g. Cushing’s)
  - Severe diabetes mellitus
DYSMENORRHEA

- Painful menstruation

- **Aetiology:** In most cases no cause can be found. In some cases, other disorders such as endometriosis, fibroids or pelvic infection may cause the pain.

- **Treatment:**
  - Regular exercise even during menstruation
  - Anti-inflammatory
  - Oral contraceptives
  - May become less severe after childbirth or with age.
ENDOMETRIOSIS

- Proliferation of endometrial tissue outside the uterine cavity
- Occurs mostly in women in their 30’s. More common in women who do not have children.
- 10 to 15% of women will experience symptoms

**Signs and symptoms:**

- Infertility (25 to 50% of infertile women have endometriosis)
- Pain before and during menstruation
- Menorrhagia
- Dyspareunia
ENDOMETRIOSIS
ENDOMETRIOSIS

- **Orthodox treatment:**
  - Progesterone – inhibit ovulation and menstruation, however some side-effects are unacceptable, e.g. weight gain
  - Androgens
  - Surgery – laparoscopy with removal of lesions
ENDOMETRIOSIS

- Alternative treatment:
  - Essential fatty acids for hormonal balance
  - Vitamin E for hormonal balance
  - Vitamin K for blood clotting
  - Iron to treat anaemia (take only if anaemia is diagnosed)
  - Vitamin C and Zinc aids with healing
UTERINE FIBROIDS

- Also called leiomyomas or myomas
- Benign growths in the uterus that consist out of muscle and connective tissue
- The locations describes the types: Submucosal, intramural or subserosal
- Can be tiny or up to several cm’s in diameter
UTERINE FIBROIDS

- Can have one or more
- Usually slow growing
- Found in 15 to 30% of females - mostly found in females older than 35
- Tend to shrink after menopause
UTERINE FIBROIDS

- Signs and symptoms:
  - Often no symptoms
  - Periods are regular, but heavy
  - Bleeding between periods
  - Anaemia
  - Dyspareunia or bleeding after intercourse
  - Pain in the legs, back or pelvis
  - Infertility may occur
UTERINE FIBROIDs

- Complications in pregnancy often occur:
  - Abortion
  - Preterm labour
  - Malpresentation
  - Obstructed labour
  - Post-partum haemorrhage
UTERINE FIBROIDs

- **Treatment:**
  - Surgery to remove the fibroids only – not always successful and usually only done if the person still wants to have children
  - Medication (hormonal therapy)
  - Partial hysterectomy
OVARIAN CYSTS

- Failure of the Graafian follicle to rupture results in a follicular cyst. Ovulation did not occur. The endometrium is in the proliferative stage of development.

- If the Corpus luteum does not degenerate and more fluid collects in it, then a corpus luteal cyst results.

- Signs and symptoms: Menstrual irregularities (missed period, then bleed 6 to 8 weeks later due to overgrowth of endometrium with breakthrough bleeding), pain over one/both ovaries, clothing sits tighter.
OVARIAN CYSTS

- Signs and symptoms:
  - Menstrual irregularities (missed period, then bleeds 6 to 8 weeks later due to overgrowth of endometrium with breakthrough bleeding)
  - Pain over one/both ovaries
  - Clothing sits tighter
POLYCYSTIC OVARIAN DISEASE/SYNDROME (PCOS)

- **Definition:** Enlarged ovaries which contain many cysts
- Affects 7 to 10% of women
- Tendency to high levels of oestrogen and testosterone. Not enough progesterone is produced to balance the effect of the oestrogen.
- Endometrium may become extremely thickened
- Increased risk of endometrial cancer, diabetes, heart disease and high blood pressure
POLYCYSTIC OVARIAN DISEASE/SYNDROME (PCOS)

- **Signs and symptoms:**
  - Secondary amenorrhea
  - Infertility due to failure of ovulation
  - Gain weight/struggle to lose weight
  - Hirsutism due to excess androgens produced by the ovaries
  - Deepened voice
  - Acne
  - Irregular vaginal bleeding

- **Diagnosis:**
  - Blood tests: LH levels increased, on ultrasound cysts are found on the ovaries
MENOPAUSE

- Usually occurs between the ages of 38 and 55
- Average age is 50
- Premenopausal from age of 40
- Menopause = no menstruation for 1 year
MENOPAUSE

- During menopause the oestrogen levels are low
- Some women have acute discomfort, other have no symptoms

- Signs and symptoms:
  - Hot flashes
  - Decreased libido
  - Dyspareunia
  - Irritability
  - Insomnia
  - Anxiety and depression
  - Aches, pains, headaches
  - Urinary urgency, urinary incontinence
  - Decreased memory, decreased concentration
  - Risk for coronary artery disease, thrombosis and osteoporosis increase
MENOPAUSE

Treatment:

- Oestrogen only
- Oestrogen and progesterone
- Topical oestrogens and progesterone's

Oestrogen therapy is contraindicated in patients with:

- Oestrogen dependant tumour of the breast, uterus or ovary
- Malignant melanoma
- Severe liver disease
- Thromboembolism or DVT
- Cerebrovascular disease (strokes)
PELVIC INFLAMMATORY DISEASE (PID)

- **Definition:** An infection of the upper female reproductive organs
- There may be inflammation of the cervix, uterus, fallopian tubes, (rarely the ovaries and peritoneum)

- **Aetiology:**
  - Mostly caused by bacteria that enter the reproductive tract of a female
  - Most often caused by gonorrhoeal or chlamydial infection
  - Bacteria may also enter during a vaginal delivery, abortion, douching, medical procedure (e.g. dilation and curettage)
PELVIC INFLAMMATORY DISEASE (PID)

- **Signs and symptoms:**
  - Fever
  - Mild to moderate abdominal pain (often aching)
  - Irregular vaginal bleeding
  - Vaginal discharge with a bad odour
  - Pain during sex
PELVIC INFLAMMATORY DISEASE (PID)

- **Complications:**
  - Infertility - the most common preventable cause of infertility in the USA
  - Tubal pregnancy
  - Chronic pelvic pain
  - Peritonitis
  - May even become fatal
FIBROCYSTIC BREAST DISEASE

- Signs and symptoms:
  - Breasts feel lumpy
  - Heaviness, discomfort, tender to touch, burning pain
  - Due to hormone levels
CERVICAL CANCER

- Most common malignancy of the genital tract

- Risk factors:
  - Early age coitus
  - Early pregnancy
  - Promiscuity
  - STD’s (gonorrhoea, HSV2, HPV)
  - OCP
CERVICAL CANCER

- **Signs and symptoms:**
  - Bleeding between periods
  - Bleeding post coital
  - Bleeding during menopause

- **Treatment:**
  - Full hysterectomy
  - Radiotherapy
  - Palliative surgery
ENDOMETRIAL CANCER

- Usually in 50 to 60 year age group

- Associated with postmenopausal women. Also associated with nulliparous females.

- Signs and symptoms:
  - Vaginal bleeding after menopause
  - Irregular bleeding before menopause
  - In advanced cases: Purulent discharge from the vagina and pain
OVARIAN TUMOUR

- Symptoms are often absent until late when the tumour has spread
- Bad prognosis
- May be abdominal swelling or pain
QUESTIONS