Gynaecology

Bacterial vaginosis
- Predominantly anaerobic overgrowth (e.g. Gardnerella vaginalis) displacing lactobacilli
  - normal vaginal pH 4.5; increased in BV to up to 7
- Risks - sexual activity / multiple partners, IUCD, smoking
- Symptoms - painless ‘fishy’ PV discharge
- Diagnosis (Amsel’s) - discharge, bacilli on microscopy, pH > 4.5, fishy odour with 10% KHO
- Management - metronidazole 500mg bd. for 1wk (alternatively PV / clindamycin cream)
- Complications - endometritis / PID, PROM, prematurity, low birthweight, HIV transmission

Benign breast lumps
- Symptoms - lump, pain, skin / nipple changes / inflammation, discharge
- Benign lumps may be non-proliferative, non-atypical proliferative, or atypical proliferative
- Oral contraceptives are associated with a decreased incidence of benign breast disease
- Cysts may be resolved with needle aspiration under LA
- Fibroadenoma - common in age < 40; ‘breast mice’ - discrete, non-tender, mobile
- Fibroadenosis - common middle-age; multiple pre-menstrual cyclically painful lumps
- Intraductal papilloma - warty lump behind areola, may be discharge; FNA / core biopsy
- Fat necrosis - commonly post-traumatic in obesity / large breasts; skin changes, hardening
- Mammary duct ectasia - perimenopausal, associated with smoking; tender areola lump
  - may be discharge, mastalgia, nipple inversion / retraction - can mimic breast cancer
- Mastitis - usually puerperal causing wedge-shaped erythema, oedema, tenderness
  - 10-day flucloxacillin initially; surgical drainage with IV antibiotics if abscess
- Investigations - mammography, USS, ductography, FNA, core biopsy

Cervical problems
- Ectropian - benign, usually asymptomatic, may cause bleeding or infection
  - common in teenagers, pregnancy, COCP use; consider diathermy, cryotherapy
- Nabothian cysts - benign, mucous-filled cysts < 1cm, post-traumatic / cervicitis
- Stenosis - at internal os; post-diathermy, infection, cone biopsy, endometriosis
  - may cause bleeding, pain, infertility, haematometra; treat with dilators / laminaria
- Cervicitis - mucopululent PV discharge, PCB, dysuria; gonorrhoea / chlamydia, HPV, HSV
Endometriosis

- Chronic oestrogen-dependent extra-uterine endometrial tissue proliferation
  - affects up to 10% of fertile women and up to 40% of infertile women; usually aged 30s
- Risks - early menarche, late menopause, nulliparity, short menstrual cycle
- Symptoms - dysmenorrhoea, dyspareunia, cyclical / chronic pelvic pain, subfertility
  - also bloating, lethargy, constipation, lower back pain, LUTS, catamenial pneumothorax
- Investigations - laparoscopy (definitive), USS (endometriomas), MRI
- Management - pseudo-pregnancy or pseudo-menopause; simple analgesia
  - first-line - COCP, depot injection, Mirena; consider Goserelin (max. 6 months)
  - danazol (androgenic) - effective but unpleasant side-effects
  - surgery - thermal / laser ablation, excision; TAH / TVH with BSO as last resort
- Complications - ovarian / breast ca., adhesions (inc. tubal), IBD

Fibroids

- Benign uterine leiomyomas stimulated by oestrogen - may degenerate / calcify
  - commonest in obesity, black women, non-smokers - symptomatic age > 30 years
- Symptoms - menorrhagia, IMB, dysmenorrhoea, dyspareunia, subfertility
  - also abdominal pain, constipation, urinary frequency, recurrent miscarriage
- Investigations - USS / TVUS, MRI, endometrial sampling, hysteroscopy
- Management - mefanamic acid, tranexamic acid, COCP, danazol, Goserelin
  - surgery - myomectomy (fertility-preserving), ablation, UAE, TAH / TVH with BSO
- Complications - anaemia, torsion, foetal malpresentation, IUGR, premature labour, PPH

Incontinence

- Stress - spontaneous leakage on exertion / coughing etc. - due to incompetent sphincter
- Urge - sudden desire to void / nocturia - due to detrusor instability or hyper-reflexia
- Risks - advanced age, pregnancy, vaginal birth, DM, obesity, neurological disease e.g. MS
- Investigations - urine dip, post-void residual volume; consider urodynamic studies
- Management - in all cases pelvic floor exercises initially, reduce caffeine, weight loss
  - for stress - TVT, colposuspension; consider duloxetine
  - for urge - bladder training (6wks), oxybutinin / tolterodine (anticholinergics), botox

Menstrual problems

- Average age of menarche is 13 years; investigate if < 10 or > 16 years
- Day 1 of cycle - normal menstrual loss is 25ml / day for 4 - 5 days (every 28 days)
- Follicular (proliferative) phase follows FSH peak - gradual increase in LH, FSH, oestrogen
• Luteal (secretory) phase follows LH surge (day 14, ovulation) - increase in progesterone
  • without fertilisation the corpus luteum degenerates, oestrogen / progesterone levels fall
• Menstrual cycle is affected by breast feeding, weight change, stress, illness
• Amenorrhoea may be caused by anorexia, hyperprolactinaemia, hyperthyroidism, adrenal tumours, PCOS, premature ovarian failure, Turner’s, cervical stenosis, imperforate hymen
• Dysmenorrhoea may be treated with NSAIDs esp. mefanamic acid, COCP

**Menorrhagia**

• Classically defined as menstrual loss > 80ml / day, but more subjective definitions preferred
• Aetiology - hypothyroidism, fibroids, polyps, PID, clotting disorders, endometrial ca.
• Investigations - cervical / bimanual examination, FBC, TFTs, clotting, TVUS / USS (if mass)
• Management - Mirena, tranexamic / mefanamic acid, COCP, norethisterone, Goserelin
  • surgery - ablation (reduces fertility), fibroid treatment e.g. UAE, myomectomy, TAH

**Premenstrual syndrome (PMS / PMT)**

• Cyclical debilitating irritability, lability, low mood, anxiety, mastalgia, bloating, loss of libido
• Risks - FH, smoking, poor diet, sedentary lifestyle
• Management - dietary (regulate carbohydrates, low fat / caffeine), exercise, stop smoking
  • SSRIs first-line if severe; consider COCP (back-to-back), HRT, GnRH with add-back

**Menopause**

• Average age of menopause (12 months of amenorrhoea) in UK is 52 years
  • follows climacteric - irregular menses for up to 4 years
  • characterised by low oestrogen / progesterone and high LH / FSH
• Symptoms - hot flushes, sweats, mood changes, loss of libido, hair loss, myalgia
  • urogenital atrophy - dryness, dyspareunia, PCB, UTI, urinary symptoms
• Associations - CVD, osteoporosis, centripetal fat, possibly Alzheimer’s
• Management - healthy lifestyle / exercise, reduce caffeine / alcohol, consider HRT
  • drug options - gabapentin, SSRI / SNRI, vaginal lubricants / moisturisers

**Hormone replacement therapy (HRT)**

• Highly effective at addressing menopausal vasomotor symptoms
• Risks - VTE, stroke, CVD (if started late); ca. breast, ovarian, endometrial (oestrogen-only)
• Contraindications - pregnancy, vaginal bleeding, VTE, recent MI, breast / endometrial ca.
• Oestrogen side-effects - breast tenderness, cramps, bloating, nausea, headaches
• Progesterone side-effects - PMT, backache, depression, pelvic pain
• Regimens - mostly short-term (< 3 years)
  • if uterus intact - cyclical / continuous combined HRT - consider tibolone if younger
  • if hysterectomy - continuous oestrogen-only HRT
Ovarian cyst

- Common **premenopausally** - 30% of women with regular menses; more if irregular menses
- Majority **follicular** or benign **cystadenomas** - 25% **functional**, 5% **malignant**
  - **serous** (solid-like) - older women, 25% bilateral / malignant
  - **mucinous** - younger women, may be very large, 5% bilateral / malignant
  - **dermoid** (teratoma) - commonest in younger women, rarely malignant, 20% bilateral
- Risks - obesity, early menarche, infertility, tamoxifen, FH (dermoid); COCP is **protective**
- Symptoms - lower abdominal / back **pain** / mass, dyspareunia, urinary frequency (pressure)
  - **torsion** / infarction / haemorrhage - episodic severe pain
  - **rupture** - pain, fever, peritonitis, shock, *pseudomyxoma peritonei* (disseminated mucin)
- Investigations - **TVUS** / USS, FNA / cytology; LDH, AFP, hCG (dermoid)
- Management - expectant if < 5cm; annual USS if 5-7cm; surgery if > 7cm
  - **laparoscopic cystectomy** if young - urgently if haemorrhagic
- Complications - **subfertility**, torsion, haemorrhage, infarction, rupture

Meig’s syndrome

- Rare, affects women aged > 40; triad of **ovarian cyst** (fibroma), **ascites**, **pleural effusion**
- Symptoms - **fatigue**, **irregular menses**, dyspnoea, ascites / weight gain, dry cough
- Investigations - USS, **MRI**, paracentesis (transudate), CA-125 (may be normal / high)
- Management - unilateral **salpingo-oophorectomy**; ascites / effusions resolve within weeks

Pelvic inflammatory disease (PID)

- Ascending usually **polymicrobial infection** of the uterus, fallopian tubes and / or ovaries
  - commonly **chlamydia** or **gonorrhoea** but may be mycoplasma, vaginal flora, TB
- Risks - **STIs** (unprotected sex, new / multiple sexual partners), IUCD, TOP
- Symptoms - **lower abdominal pain**, **deep dyspareunia**, PCB / IMB, purulent PV discharge
  - associated with cervicitis, adnexal tenderness / cervical excitation, **high fever**
- Investigations - **pregnancy test**, **cervical swabs**, CRP (high), USS, laparoscopy (ideally)
- Management - consider removal of IUCD, GUM referral - full STI screening / contact tracing
  - **IM ceftriaxone** 500mg stat; 14 days of **doxycycline** 100mg / **metronidazole** 400mg bd.
- Complications - **subfertility**, **ectopic pregnancy**, chronic pelvic pain, abscess, **Reiter’s**
  - **Fitz-Hugh-Curtis** syndrome - perihepatitis; RUQ pain, jaundice; ‘violin string’ adhesions

Endometritis

- Polymicrobial - may be **obstetric** (postpartum esp. CS) or non-obstetric, acute or chronic
  - may also follow PID, invasive gynaecological procedures, RPOC, bacterial vaginosis
- Risks - CS, prolonged labour, placental CCT, anaemia, FSS, anaesthetic, IUCD
- Symptoms - abdominal pain, fever, PV discharge, PPH, dyspareunia, dysuria
- Management - consider IV antibiotics, otherwise similar protocol to PID
Polycystic ovarian syndrome (PCOS)

- Thought to be a disorder of *sex hormone metabolism* e.g. excess LH; poorly understood
  - high LH over-stimulates ovaries to produce *androgens*; low FSH fails to convert these
  - *hyperinsulinaemia* leads to *dyslipidaemia* and *clotting abnormalities*
- Symptoms (young women) - *oligo/amenorrhoea, infertility*, miscarriage, hirsutism, virilism
  - also *obesity*, clitoromegaly, *acanthosis nigricans*
- Investigations - LH:FSH ratio (high), testosterone (high), OGTT, lipids, **USS / laparoscopy**
- Management - *clomiphene* (anti-oestrogen, risk of multiple pregnancy / OHSS)
  - consider COCP, metformin, orlistat, cyproterone (anti-androgen), spironolactone
  - potentially *surgery* - laparoscopic ovarian electrocautery
- Complications - *ovarian ca., type II DM / GDM, OSA*

Prolapse

- Pelvic organs (bladder, uterus, rectum) supported by *levator ani* and *endopelvic fascia*
- Commonest prolapses - *cysturethrocele, uterine, rectocele*
  - anterior - *urethrocele* (with stress incontinence), *cystocele* (urinary frequency if large)
  - middle - *uterine, vaginal vault* (post-hysterectomy), *enterocele* (via pouch of Douglas)
  - posterior - *rectocele*
- Risks - advanced age, high parity, vaginal birth, obesity, spina bifida
- Staging (**POPQ**) - 1 (> 1cm pre-hymen), 2 (within 1cm of hymen), 3 (subtotal), 4 (total)
  - uterine - 1st degree (intra-vaginal), 2nd (cervical prolapse), 3rd (procidentia - total)
- Symptoms - feeling / sight of protrusion, cannot retain tampons, dyspareunia, incontinence
  - also urinary (frequency, difficulty), bowel (constipation, incompleteness, ‘splinting’)
- Management - initially smoking cessation, weight loss, *pelvic floor exercises*
  - *pessary* - silicone / plastic ring; fit largest comfortable; change every 3-6 months
  - surgery - colposuspension, hysterectomy, sacrospinous fixation, posterior colporrhaphy