



Breasts

Mammography

- Most sensitive of breast imaging modalities
- Indications for imaging: lump / nodularity, nipple of skin change, nipple discharge, focal symptoms
- Sensitivity reduced in young women due to presence of increased glandular tissues (not used for under 35s)
- Views: medio-lateral and cranio-caudal
- Soft tissue mass with spicules extending into surrounding tissue
 - 95% are due to invasive cancer
 - ▲▲ DCIA, fat necrosis, fibromatosis, granular cell myoblastoma
- ▲▲ Radial scar, invasive cancer, DCIS, surgical scar
- ▲▲ Fibroadenoma, cyst, medullary carcinoma, lipoma, abscess
- Classifications
 - Spiculated masses
 - Stellate lesions: Localised distortion of breast tissue but with no identifiable mass
 - Circumscribed masses
 - Microcalcification: Debris within duct wall or lumen
 - ▲▲ DCIA, invasive cancer (may be sole feature), papilloma, fat necrosis, fibroadenoma

Breast Ultrasound

- Complements mammography and can differentiate between solid and cystic lesions
- Useful for: palpable abnormality, mammographic abnormality, breast sepsis, axillary lymphadenopathy
- Sensitivity of 75%, specificity of 97% for malignancies
- Cysts: smooth walls, sharp anterior and posterior borders, black centres
- Malignant tumour: irregular edges, internal echoes, cast shadows

Palpable breast mass

- Malignant: hard consistency, painless, irregular margins, fixed to skin or duct wall, skin dimpling, bloody / unilateral discharge, nipple retraction
- Benign: firm or rubbery consistency, painful, regular or smooth margins, mobile, possible green / yellow discharge, no nipple retraction

Breast cysts

- 7% women will develop palpable cyst
- Usually occur in perimenopausal women
- Represent wear and tear of breast tissue over years of cyclical oestrogen exposure
- May appear suddenly and painful
- Management: Initial simple aspiration
- Consider excision if reappears repeatedly or residual lump after aspiration

Breast Mass

- Benign, mobile, discrete, rubbery
- Unclear pathogenesis
- Smooth or slightly lobulated
- Usually 2 - 3 cm in diameter
- Usually present between 16 - 24 years or incidental finding at screening
- Risk of malignant transformation is 1 in 1000
- Grow when pregnant
- Fibroadenoma
 - Over 5 year period: 1/2 grow, 1/4 remain stable, 1/4 shrink
 - <25 years: observe
 - 25 - 35: conservative management
 - > 35: excision biopsy
 - Management: Removal if large and patient choice

Screening

- All women between 50 and 70 screened every 3 years
- Extending to 47 - 73 by 2012
- Clinical examination and mammography
 - Double blind reading of mammogram
 - Normal = letter to woman; rescan in 3 years
 - Abnormal = recall for assessment
- Detection rate 6 cancers per 1,000 women screened
- Mammography: 1 in 10,000 will develop cancer
- Harmful effects: anxiety, unnecessary intervention, over diagnosis
- Benefits: treat cancer early, smaller non invasive cancers

Breast Infection

- Lactational breast abscess
 - Typical staph A invasion during breast feeding
 - Rx: flucloxacillin
- Non Lactational breast abscess
 - More common; mixed bacteria
 - More common in younger women, smokers, DM, RA, steroids, following trauma
 - Rx: augmentin

Breast Pain

- 50% breast clinic referrals, however only 7% breast cancers present as painful
- Cyclical Mastalgia
 - Usually bilateral, minor and tolerated
 - Average age of onset 24 years
 - No evidence of psychopathology
 - In those with no palpable mass no imaging is required
 - 80% only require reassurance
 - Consider if: > 6 months / > 7 days of cycle
 - Evening primrose oil: at least 4 months treatment; 50% response rate; SE: nausea
 - Danazol: 80% response rate; SE: acne, weight gain, hirsutism, need to use condoms
 - Bromocriptine: 50% response rate, SE: postural hypotension
- Non Cyclical Mastalgia
 - Average age on onset 45 years
 - Usually unilateral and localised
 - Usually has MSK cause
 - Rarely cancer
 - Management: support bra and NSAIDs

Nipple Discharge

- Physiological
 - Neonatal period, lactation, pregnancy, post lactation, following mechanical stimulation, hyperprolactinaemia
 - Features: multi duct, coloured
- Duct pathology
 - Duct ectasia, duct papilloma, breast cancer
 - Features: blood / serum, uniduct
- Description
 - Unilateral / bilateral, single or multiple ducts, colour and nature, blood stained, spontaneous / expressed
- Galactorrhoea - milk secretion unrelated to breast feeding
 - Physiological causes: mechanical stimulation, extremes of reproductive life, post lactation, stress
 - Drug causes: dopamine antagonist (haloperidol), dopamine depleting agents (methyl dopa), oestrogens, opiates
 - Pathological causes: hypothalamic / pituitary lesions and tumours, ectopic prolactin secretion, hypothyroidism, chronic renal failure
- Management
 - Careful history and breast examination
 - Mammography if over 35
 - Serum prolactin
 - Most women can be reassured
 - Surgery if: discharge is profuse and embarrassing or malignancy cannot be excluded