SIGNIFICANT OTHERS

Miscellaneous Benign Breast Conditions

FAT NECROSIS

• TRAUMATIC
  • Cell rupture
  • Seat-Belt injury
  • Blunt trauma
  • Iatrogenic injury
    - Surgery, Flaps, Radiotherapy

• Pathology
  • Single droplet of Triglyceride per adipocyte
  • Extra-cellular oil after cell rupture causes chronic inflammation and granuloma formation
  • Hormone Sensitive Lipase - high in adipocytes, low in macrophages

• Presentation
  • Palpable lump - irregular, firm, producing distortion or dimpling
  • History of trauma, often months – 2 years before
FAT NECROSIS

- Imaging findings
  - Early - haematoma
    - A superficial mass on mammography
    - Tomodense, well defined with well defined margins
  - Echogenic mass with cystic spaces on US
  - Later
    - Radiolucent, well-defined cyst
    - Progressive fibrosis and calcification
    - Ultrasound - Echogenic band or mass in subcutaneous tissues
    - Cysts with echogenic calcified wall and acoustic shadowing

- Diagnosis
  - History and Imaging
    - Biopsy – is it necessary, will it make it worse? Consider FNA

- Management
  - Reassurance
  - ? Aspirate oil cysts

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IATROGENIC INJURY

- After simple to complex surgery
- Around margins of flaps
- Late radiotherapy effect

- Risk factors are smoking, BMI >30, radiotherapy and ischaemia time
- Peak incidence is 2-3 years post-op

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- Fat Grafting
  - Adipose-derived stem cells
  - Ischaemic fat
  - Traumatic acquisition/delivery and cell rupture
  - Results in increased vascularity and fat volume or fibrosis and calcification?

IDIOPATHIC GRANULOMATOUS MASTITIS

- Presentation
  - Palpable breast mass, often tender and peripheral
  - DD inflammatory cancer, Lobular cancer

- Imaging findings
  - Mammogram - Unilateral focal or regional asymmetry
  - Ultrasound – hypoechoic mass(es) with indistinct or irregular margins, increased vascularity, sinus tracts
  - MRI – ill-defined masses and non-mass enhancement, intense parenchymal enhancement
IDIOPATHIC GRANULOMATOUS MASTITIS

- Diagnosis of exclusion - Core Biopsy and Cultures
  - Exclude:
    - TB, Sarcoid, Fungal infection
    - Periductal Mastitis,
    - Fat necrosis, Vaccination
- Management
  - Medical – antibiotics
    steroids, methotrexate
  - Surgical – excision (consider ducts)
  **BUT**
  Wound infection, delayed healing, recurrence
- Followup
  - For wound infection and recurrence

MONDOR'S DISEASE

- Presentation
  - Dull pain associated with an elongated mass
  - History of
    - History of
    - Direct trauma (males) or surgery
    - Vigorous arm exercise
MONDOR'S DISEASE

- Pathology
  - Palpable tender cord just beneath the skin of the breast
    - 'Bowstring'

- Imaging findings
  - Mammography shows a tubular structure
  - B/S shows a superficial vessel without flow +/- intraluminal thrombus

Diagnosis
- Clinical +/- imaging

Management
- Analgesia
- ? divide under LA

Follow-up
- There is an incidence of cancer diagnosis in the next 2 years

Anatomy
- Usually the Thoraco-Epigastric vein, sometimes Lateral Thoracic or Superior Epigastric
- Involves the epigastric plexus to the inguinal vessels
PASH

Pseudo–Angiomatous Stromal Hyperplasia 1986

- **Presentation**
  - Breast mass – palpable or on screening
  - Often painful or tender 1/3
  - Pre-menopausal women

- **Pathology**
  - Hormone-dependent collagenous expansion of the stroma
  - Benign proliferation of myofibroblasts which are PR positive CD34 positive
  - DD angiosarcoma, phyllodes tumour

- **Imaging findings**
  - Round or Oval circumscribed mass, DD Fibroadenoma

- **Diagnosis**
  - Core biopsy or excision

- **Management**
  - Excise or observe, depending on the size and FH
DIABETIC MASTOPATHY

Sclerosing Lymphocytic Lobulitis

• Presentation
  • Premenopausal diabetics
  • Usually a large ‘hard’ painless breast mass

• Imaging findings
  • Mammogram - ill-defined masses/densities
  • Ultrasound - irregular hypoechoic masses, marked posterior shadowing
  • MRI - variable
DIABETIC MASTOPATHY

Sclerosing Lymphocytic Lobulitis

- Pathology
  - Prominent keloidal fibrosis and lymphocytic infiltrate
    - DD: Extra-nodal MALT lymphoma

- Diagnosis
  - Core biopsy

- Management - conservative

- Followup - none
JUVENILE PAPILLOMATOSIS
Swiss cheese disease

- Pathology
  - Usually a single cystic mass in UOQ
  - Papillary epithelial hyperplasia, numerous cysts and dilated ducts with dense stroma (No papillomas!)
  - Atypia in 10%

- Presentation
  - Children and adolescents, but mean age 20
  - Firm, mobile Lump, 4 cm, suggesting Fibroadenoma
  - FH breast cancer 1/4

- Imaging findings
  - Ultrasound - small masses with heterogenous echotexture

- Management/Diagnosis – surgical excision

- Followup
  - Yes - Note - significant subsequent cancer risk if FH and bilateral or recurrent