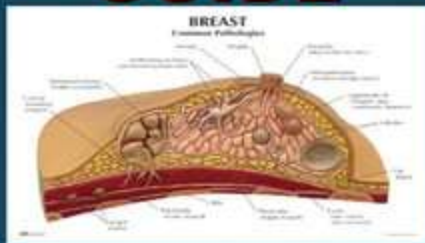


THE BREAST CLINIC GUIDE



DR. MOHAMAD AL-GAILANI FRCS

Consultant Breast Surgeon

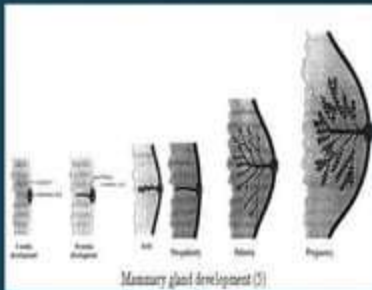


Riyadh, KSA

2018

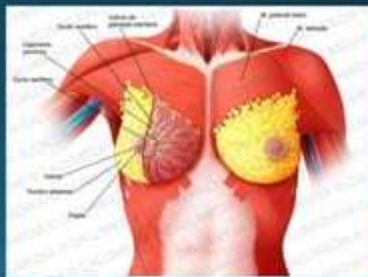
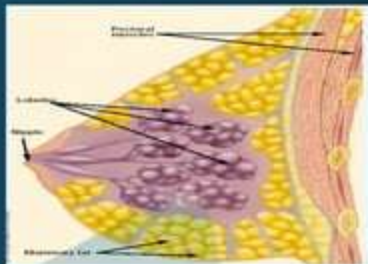
Breast Embryology

- Breast is a modified sweat gland.
- At **6 weeks**: solid downgrowth's of epidermis extend into the mesenchyme from the axilla to the inguinal regions.
- These ridges (**Milk Lines**) disappear except in the pectoral area.
- The nipple forms during the perinatal period with the proliferation of the mesenchyme underlying the areola.



BREAST ANATOMY

- Each Breast: **15 to 20** lobules
- Lobules: acini of two types of cells (epithelial and myoepithelial) that surround a lumen.
- Milk Ducts: **5 to 9** open on surface of nipple
- The primary lymphatic drainage is to the axillary lymph nodes and the secondary lymphatic drainage is to the internal mammary nodes.



ABERRATION OF NORMAL DEVELOPMENT & INVOLUTION (ANDI)

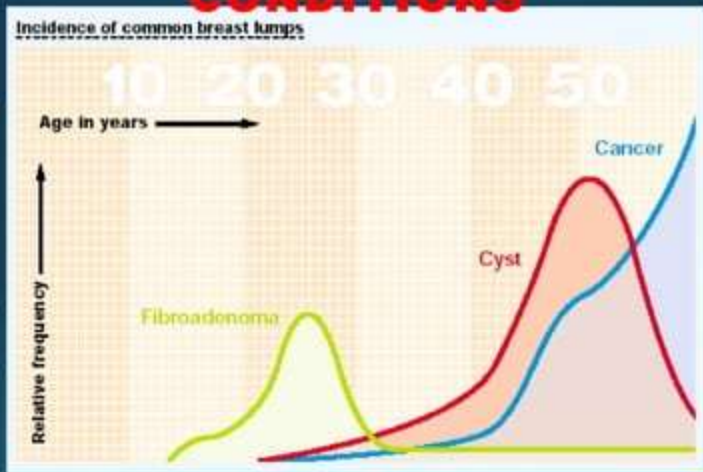
- Juvenile hypertrophy
- Fibroadenoma
- Cyclical Mastalgia & Nodularity
- Breast Cysts
- Sclerosing lesions
- Duct ectasia



A
G
E



TIME LINE OF COMMON BREAST CONDITIONS



MANAGEMENT OF BREAST DISEASES

1. Assess and Exclude Cancer!
2. Reassure Patient
3. Treat The Breast Condition
4. Usually No Follow-up Necessary.



THE TRIPLE ASSESSMENT

1. Physical Exam (P)

Normal < P1-P5 > Malignant

2. Imaging:

➤ Mammography (R)

Normal < R1-R5 > Malignant

➤ U/S (U)

Normal < U1-U5 > Malignant

3. Histology:

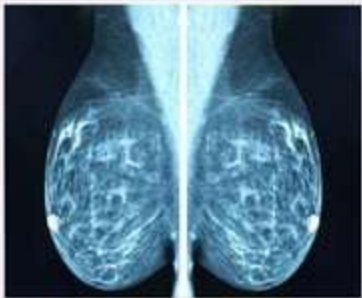
➤ FNAC (C)

Inadequate < C1-C5 > Malignant

➤ NCB (B)

Normal < B1-B5 > Malignant

MAMMOGRAPHY (From age 35 years)



Normal
mammogram

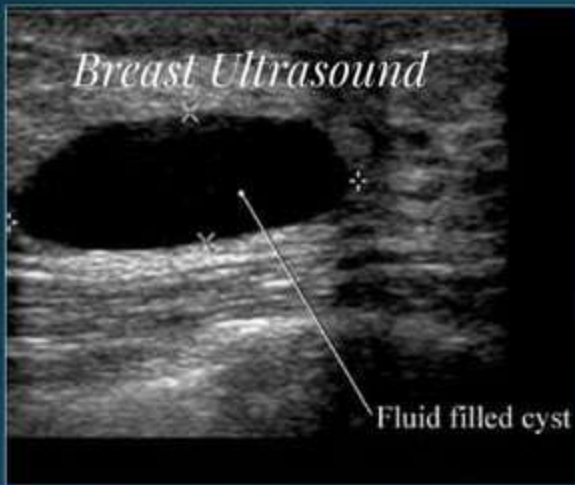


Benign cyst
(not cancer)



Cancer

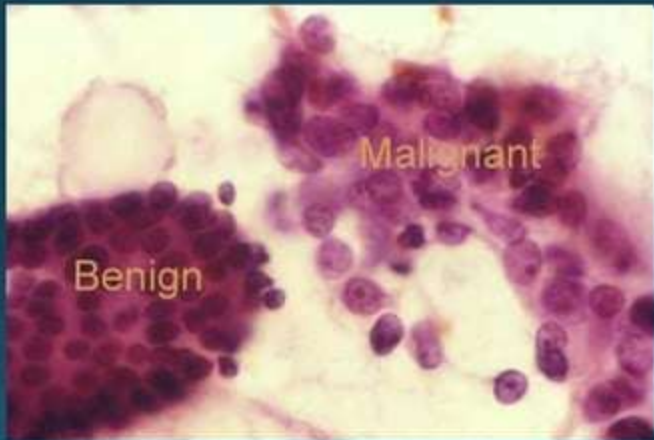
BREAST ULTRASOUND



- Any age
- Cyst versus Solid
- Complimentary to Mammography

FINE NEEDLE ASPIRATION CYTOLOGY (FNAC)

C1 Inadequate C2 Benign C3 Indeterminate C4 Suspicious C5 Malignant



NEEDLE CORE BIOPSY (NCB)

- The **Gold Standard** in breast biopsy
- Manual or Ultrasound Guided
- More reliable than Fine Needle Aspiration Cytology (FNAC)
- Can request Receptor Status and Immunohistochemistry for Cancer



A core needle biopsy allows more tissue to be removed from the breast. This allows the pathologist to give a histological diagnosis as against a cytological diagnosis obtained by FNAC

TOP 10 BREAST COMPLAINTS



1. Breast Pain
2. Painful Lumpiness
3. Breast Lump
4. Duct Ectasia
5. Nipple Discharge
6. Mastitis
7. Fat Necrosis
8. Breast Skin Conditions
9. Inverted Nipple
10. Breast Cancer

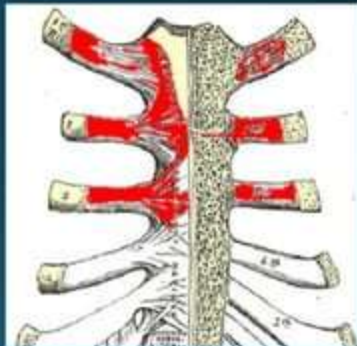
1. MASTALGIA (PAIN)

- Younger women who are still having their periods and around the menopause.
- An important concern for a woman with any breast complaint is whether it could be cancer!
- Rarely the only symptom of breast cancer.
- Cyclic mastalgia: about 2 thirds



NONCYCLIC MASTALGIA

- Breast pain that is not associated with the menstrual cycle
- Less common than cyclic pain.
- Typically occurs in women older than 40 years
- May be Musculoskeletal pain
- Look for Trigger points of tenderness
- **Tietze's syndrome** Costochondritis.



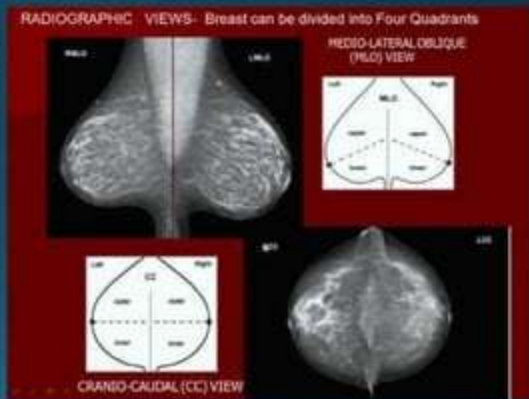
MASTALGIA: TREATMENT

- Examine +/- Image
- Reassure
- Non Steroidal Anti Inflammatory Drug (NSAID) Jell
- Evening Primrose Oil (EPO) ineffective, Placebo effect.
- **Not responding:**
 1. Danazol
 2. Bromocriptine
 3. Tamoxifen (avoid in pregnancy)



2. FIBROADENOSIS (PAINFUL LUMPINESS)

- Found in women in their 30's and 40's.
- Disappears after menopause
- Usually diffuse and ill-defined
- Usually cyclic with menses
- Painful and prominent before menses
- Resolves with menses



3. BREAST LUMP

- Every Breast Lump is potentially a breast cancer until proven otherwise!
- **Triple assessment:**
 1. Physical Exam
 2. Imaging
 - Ultrasound
 - Mammography > 35 years age
 3. Histology
 - Needle core biopsy



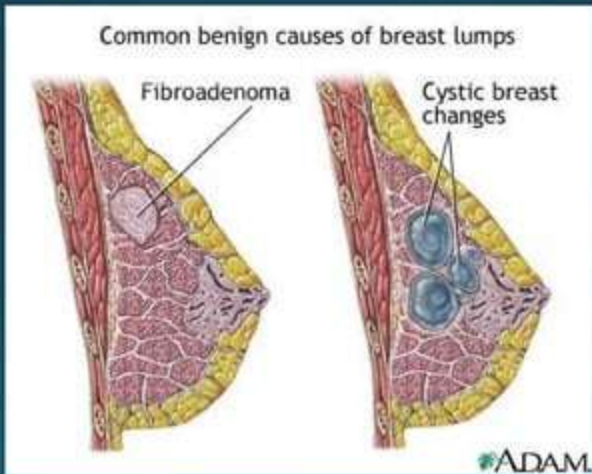
SIZE OF LUMP & DIAGNOSIS

- Average-size lump found by a mammogram
- Average-size lump found by a doctor's examination
- Average-size lump found by a woman who examines her breasts each month
- Average-size lump found by a woman who doesn't examine her breasts each month

- Breast Screening can spot a lump as small as few mm in diameter.
- Breast awareness and breast self exam (BSE) has a higher chance of recognising a lump earlier.
- The earlier diagnosis of a malignant breast lump, the better the chance of survival following treatment.

ANDI: FIBROADENOMA & BREAST CYST

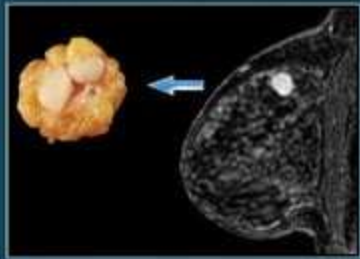
YOUNG
AGE AND
TEENS



MIDDLE
AGE
WOMEN

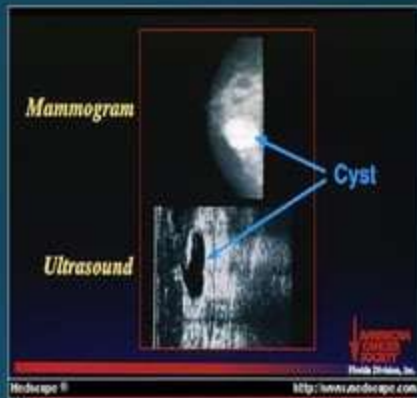
FIBROADENOMA

- Part of ANDI
- Women younger than 30 years.
- Discreet lump and freely mobile.
- If less than 10mm then 2/3 may disappear within 2 years
- If larger, unlikely to disappear
- Needle biopsy if not for excision
- Offer excision if anxious, send for histology



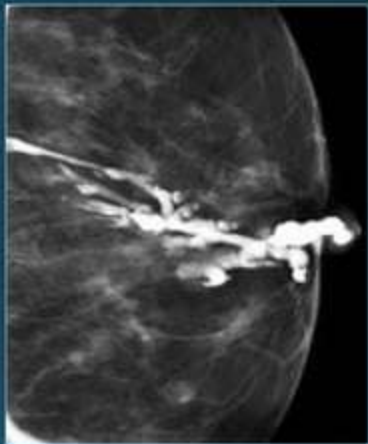
BREAST CYST

- Part of ANDI
- Women in their 40's
- Overlaps with breast cancer age incidence
- Ultrasound is diagnostic.
- Aspirate in clinic if feasible
- No fluid cytology necessary, only if bloody.
- The lump should disappear after aspiration
- Recurrent
- 1% Malignant Cyst adenocarcinoma
- Suspect if bloody fluid, re-accumulates rapidly or if ultrasound is suggestive.



4. DUCT ECTASIA

- Dilatation and inflammation of milk ducts
- Commoner in smokers
- Pain
- Lumpiness
- Nipple discharge, white, green, blue,..
- Nipple retraction
- Chronicity



PERIDUCTAL MASTITIS

- Non-lactational mastitis
- Sterile.
- Aerobic and anaerobic bacteria.
- Only one ductal system in one breast
- Fistula to the periareolar area.
- Chronic and Recurrent
- Treatment with antibiotics
- Total Duct Excision



5. NIPPLE DISCHARGE



- Duct Ectasia- white, yellow, green
- Hyperprolactinaemia- spontaneous, milky & bilateral
- Intraductal Papilloma- bloody, single spot
- Intraductal Papillary Carcinoma- bloody, mass

NIPPLE DISCHARGE: MANAGEMENT

- Physical examination
- "Haemostix" can be used to test for the presence of blood
- Cytology if bloody
- Ultrasound or Mammography in > 35 years of age
- Serum Prolactin
- Cancer is unlikely if the discharge is coming from both nipples and/or multiple ducts.

NIPPLE DISCHARGE: INDICATIONS FOR SURGERY

- Malignancy can not be excluded
- The discharge is profuse and embarrassing
- Single duct blood-stained discharge
- **Surgery:**
 - Young women - **Microdochectomy**
 - Older women - **Total Duct Excision (Hadfield's Operation)**

treatment

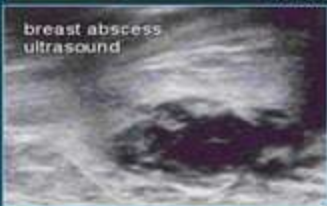
Surgery

- less than 30 yrs: microdochectomy



6. MASTITIS AND BREAST ABSCESS

- Lactational and non-lactational
- Early treatment with appropriate antibiotics
- Ultrasound to exclude Abscess
- US guided aspiration of abscess
- Rarely requires Incision and Drainage
- Think of...
- Underlying Inflammatory Cancer!



7. FAT NECROSIS

- Sudden appearance of lump
- History of trauma or bruising
- Characteristic Ultrasound and Mammographic distinguishing features
- Always resolves with time
- Follow up to ensure resolution



8. ECZEMA OF SKIN V ECZEMA OF NIPPLE



Skin Condition



Paget's Disease of Nipple
BREAST CANCER

9. Nipple Inversion

- Causes:
- Congenital
- Duct Ectasia
- Periductal mastitis
- Postoperative
- Breast Cancer

Types:

- Slit inversion- usually benign
- Central inversion- suspect malignancy

10. BREAST CANCER

- Affects 1:8 women during their lifetime
- Lump
- Skin Dimple
- Nipple inversion
- Bloody Nipple Discharge
- Enlarged Axillary Lymph Glands
- Nipple Eczema
- Inflammatory



Breast Cancer: Workup

- HISTORY

- EXAM

- INVESTIGATE:

- ✓ Mammogram
- ✓ Ultrasound
- ✓ Needle Core Biopsy

- TREAT:

- ❖ Surgery +-
- ❖ Chemotherapy +-
- ❖ Immunotherapy +-
- ❖ Radiotherapy +-
- ❖ Hormone therapy +-

BREAST CLINIC GUIDE

Take Home Message

- Most breast conditions are non malignant.
- Any Lump should be investigated according to the Triple Assessment.
- Breast Cancer is however common...
- It affects 1:8 women in their lifetime!
- **Rule out Breast Cancer**
- Otherwise examine, investigate, reassure and discharge!



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