

BENIGN BREAST DISEASES



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HOW IMPORTANT ARE BENIGN BREAST DISEASES

- MAJORITY (>90%) OF PATIENTS
PRESENTING TO A BREAST CLINIC SUFFER
FROM BENIGN DISEASE

..... In developed countries

- BENIGN BREAST DISEASE CAUSES
CONSIDERABLE MORBIDITY AND ANXIETY

- ACCURATE DIAGNOSIS IS IMPORTANT SO
MALIGNANCY WILL NOT BE MISSED WHEN
PRESENT AT AN EARLY STAGE

..... Paget's disease / inspissated milk during lactation

BENIGN BREAST DISEASES

1. CONGENITAL ABNORMALITIES
2. ABERRATIONS OF NORMAL BREAST DEVELOPMENT AND INVOLUTION
 - ANDI
3. CAUSED BY EXTRINSIC PRECIPITATING FACTORS
 - NON ANDI

CONGENITAL

- CAUSES CONSIDERABLE CONCERN
- SUPERNUMERARY NIPPLES
 - EXCISED IF IRRITATION
- ACCESSORY BREAST TISSUES
 - ACCESSORY BREAST TISSUES USUALLY FOUND IN THE AXILLA.
 - PROMINENT DURING PREGNANCY
 - BOTH BENIGN AND MALIGNANT CONDITIONS CAN OCCUR AT THESE SITES
 - EXCISED IF SYMPTOMATIC



- **HYPOPLASIA**

- USUALLY UNILATERAL BUT CAN BE BILATERAL
- POLAND'S SYNDROME IS ASSOCIATED WITH ABSENCE OF PECT. MAJOR
- IPSILATERAL LAT. DORSI FLAP +/- IMPLANT
- PURE ASYMMETRY
 - REASSURE
 - AUGMENT +/- CONTRALATERAL REDUCTION
- TUBULAR BREAST
 - CONSTRICTING RING AT THE BASE
 - SURGICAL MANAGEMENT IS CHALLENGING



ANDI – Aberrations of Normal breast Development and Involution

AGE	NORMAL PROCESS	ABERRATION
< 25 y	<ul style="list-style-type: none">• STROMAL BREAST DEVELOPMENT	<ul style="list-style-type: none">• JUVENILE HYPERTROPHY
25 – 40 y	<ul style="list-style-type: none">• LOBULAR• CYCLICAL ACTIVITY	<ul style="list-style-type: none">• FA• CYCLICAL MASTALGIA, CYCLICAL NODULARITY
35 – 55 y	<ul style="list-style-type: none">• INVOLUTION OF LOBULAR, STROMAL AND DUCTAL	<ul style="list-style-type: none">• MACROCYSTS, SCLEROSING LESIONS, DUCT ECTASIA

PATHOLOGICAL CLASSIFICATION

- INFLAMMATORY

- Acute Bacterial infections

- Granulomatous lesions

- Idiopathic granulomatous mastitis
- Infectious granulomas
- Fat necrosis / Sarcoidosis

- Duct ectasia

- INTRAEPITHELIAL LESIONS

- Non proliferative lesions

- Apocrine metaplasia / Sq metaplasia / Cysts

- Proliferative

- Duct hyperplasia
- ADH
- Intraductal papilloma / intraductal papillary carcinoma
- DCIS / LCIS

- **PSEUDOINFILTRATIVE LESIONS**
 - Sclerosing adenosis
 - Radial scars / Complex sclerosing lesions
- **INVASIVE**
- **MYOEPITHELIAL**
 - Myoepitheliosis
- **FIBROEPITHELIAL**
 - FA
 - Phylloides
- **STROMAL / MESENCHYMAL**
 - Fibromatosis
 - Myofibroblastoma
 - Pseudoangiomatous stromal hyperplasia

MALIGNANT RISK

Cancer Causes Control. 2010 Jan 19. [Epub ahead of print]

A multi-center prospective cohort study of benign breast disease and risk of subsequent breast cancer.

Kabat GC *et al*

Department of Epidemiology and Population Health, Albert Einstein College of Medicine, Bronx, NY, 10461, USA,
geoffrey.kabat@einstein.yu.edu.

compared to women with normal pathology / non-proliferative disease, women with proliferative disease without atypia have a modestly increased risk of breast cancer, whereas women with proliferative disease with atypical hyperplasia have a substantially increased risk.

Relative to non-proliferative BBD/normal pathology, the multivariable-adjusted odds ratio for proliferative lesions without atypia was 1.45 (95% CI 1.10-1.90), and that for atypical hyperplasia was 5.27 (95% CI 2.29-12.15). n = 1239

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FIBROADENOMA

- ARISE FROM HORMONE DEPENDENT LOBULE OF THE TERMINAL DUCT LOBULAR UNIT. Connective tissue / Epithelial cells.
- SIMPLE – STROMA WITH LOW CELLULARITY AND REGULAR CYTOLOGY
- PHYLLODES – MARKED CELLULARITY WITH ATYPIA
- CANNOT ALWAYS DIFFERENTIATE BY CORE BIOPSY

CAN WE IGNORE FIBROADENOMAS

- FOLLOWED UPTO 2 YEARS IN WOMEN < 40yrs,
 - 55% not changed
 - 37% got smaller
 - 8% increased in sizeDixon JM. *BJS* 1996
- FA over 5cm – ‘GIANT FA’ – Commonly seen in African countries
- IN OLDER WOMEN PICTURE IS LESS CLASSICAL (Differentiating from a Ca is essential)
- RARELY A MALIGNANT TRANSFORMATION CAN OCCUR WITHIN A FA. Non invasive or lobular in nature

SURGICAL OPTIONS

- CONSERVATIVE MANAGEMENT – observe with follow up USS
- SURGICAL EXCISION
- US GUIDED PERCUTANEOUS EXCISION (for lesions less than 4cm)
- CRYOABLATION

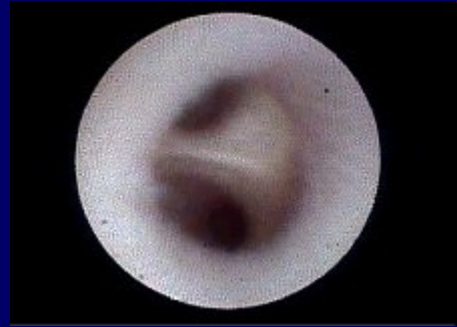
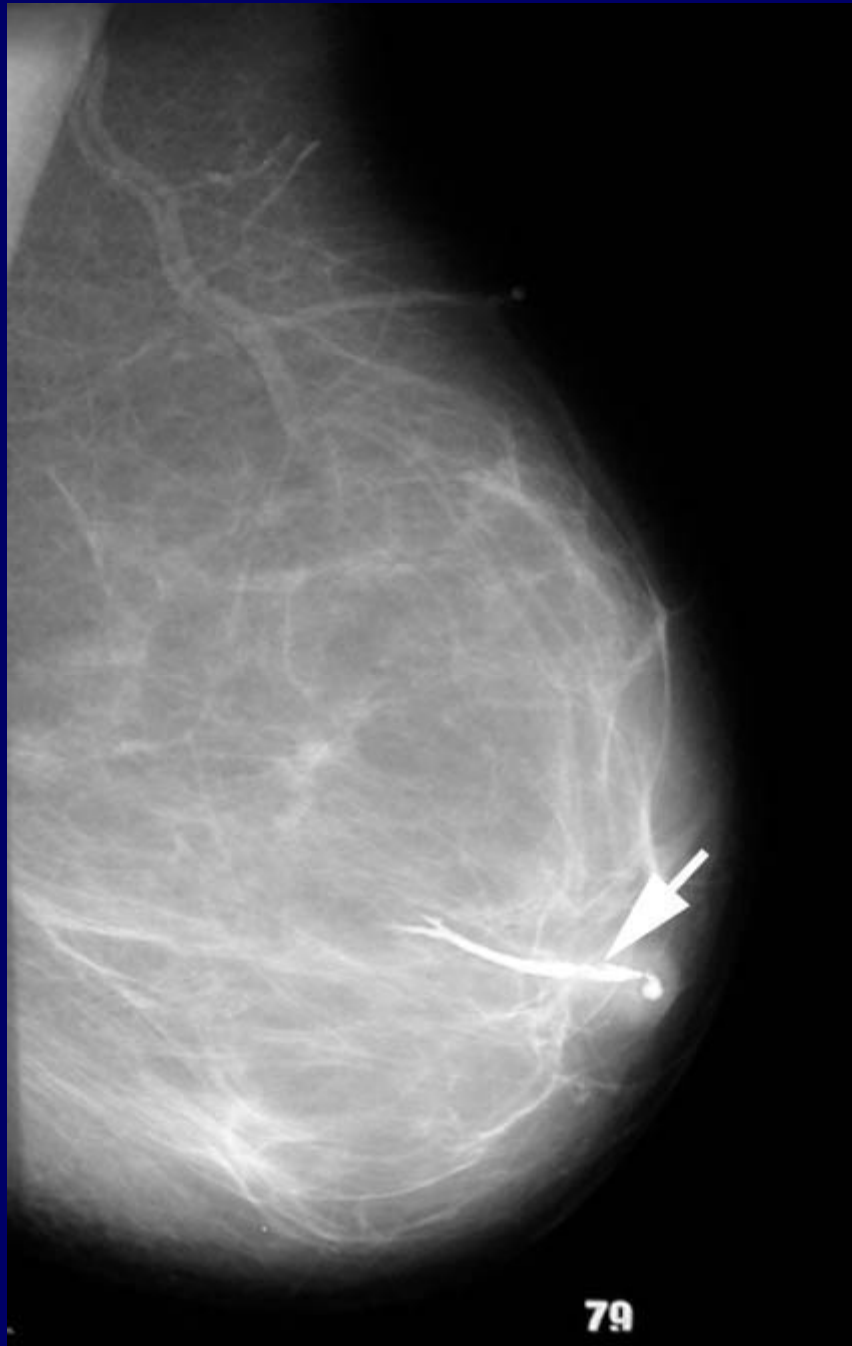
- MANAGEMENT DEPENDS ON THE AGE, PRESENTATION AND TRIPLE ASSESSMENT
 - < 30years - IF CONFIRMED OF FA WITH CYTOLOGY
.....REASSURE.
- REPEAT USS in 6 MONTHS
 - > 30years - CORE BIOPSY....REASSURE
 - EXCISION RECOMMENDED
 - INCREASE IN SIZE
 - PAIN
 - DISTORT THE BREAST
 - MORE THAN 4CM
 - PATIENT WISHES
- (Dixon JM BJS 1996)
- RECURRENCES RARE. Mainly due to undiagnosed adjacent lesion

PHYLLODES TUMOUR

- AETIOLOGY UNKNOWN
- LESS COMMON
- LATE PRESENTATION. 10 – 15 years later than FA
- GROWS RAPIDLY. NOT ATTACHED TO SKIN. SKIN CAN ULCERATES.
- DIFFERENTIATE FROM BENIGN TO MALIGNANT DIFFICULT CLINICALLY.
- BENIGN – BORDERLINE - MALIGNANT
- BENIGN – EXCISE WITH 1cm MARGIN
- MALIGNANT – WLE TO MASTECTOMY
- 5% CAN HAVE Ax LN
- 5% CAN METASTASISE
- 20% CAN RECUR

NIPPLE DISCHARGE

- 5% OF REFERRALS TO BREAST CLINIC
- 5% IS DUE TO MALIGNANCY
- PHYSIOLOGICAL OR PATHOLOGICAL
- WHAT IS THE SIGNIFICANT DISCHARGE?
- INVESTIGATIONS
 - CLINICAL ASSESSMENT AS FOR BREAST LUMPS
 - CYTOLOGY AND OCCULT BLOOD TEST IS NOT SENSITIVE (less than 10% with bloody discharge have an underlying malignancy) ...Simmons Ann Surg Oncol 2003
 - MAMMOGRAPHY (sensitivity can be low as 57%) / USS
 - DUCTOSCOPY AND LARVAGE (yields 100 times more cells than simple cytology)



- GALACTORRHOEA – Prolactin >1000 mIU/L
- DRUGS
- DUCT ECTASIA – Dilatation and shortening of the terminal ducts within 3cm of the nipple) – CREAMY DISCHARGE.
CAN HAVE RETRACTED NIPPLES
- DUCT PAPILOMAS – BLOODY OR SEROUS.
 - SOLITARY / MULTIPLE / JUVENILE
 - RARELY CAN HAVE MULTIPLE PAPILOMAS. PRESENT AS A MASS. HAVE MALIGNANT POTENTIAL IF THEY HAVE ATYPICAL HYPERPLASIA
- DCIS – 33% OF IN SITU CAN HAVE NIPPLE DISCHARGE
- INVASIVE CANCERS – V. RARE
- REASSURE
- MICRODOCHECTOMY
- TOTAL DUCT EXCISION - divide all ducts under the nipple and breast tissues up to a depth of 2 cm. Usually done for periductal mastitis

MASTALGIA

- COMMON – can be up to 60% - 70%
- 5% OF CANCER PATIENTS HAVE PAIN
- 2.7% OF MASTALGIA PATIENTS ARE DIAGNOSED OF HAVING A CANCER
- TRUE MASTALGIA OR REFERRED PAIN
- TRUE – BREAST SWELLING AND NODULARITY. CAN RESOLVE SPONTANEOUSLY IN 20 – 40%. But recur
- DIFFERENTIATING CYCLICAL AND NON CYCLICAL NOT IMPORTANT AS TREATMENT IS IDENTICAL
- CAUSE UNKNOWN. Excess prolactin, estrogens and less progesterone OR increased receptor sensitivity to raised ratio of saturated fatty acids to essential fatty acids

J Obstet Gynaecol Can. 2006 Jan;28(1):49-71; quiz 58-60, 72-4.

Mastalgia.

[Rosolowich V](#), [Saettler E](#), [Szuck B](#), [Lea RH](#), [Levesque P](#), [Weisberg F](#), [Graham J](#), [McLeod L](#), [Rosolowich V](#); [Society of Obstetricians and Gynecologists of Canada \(SOGC\)](#).

Breast Health Centre, Winnipeg Regional Health Authority, Winnipeg, Manitoba.

OBJECTIVE: To review the current management of women with breast pain. OPTIONS: The effect of various treatment modes and health practices, including medications, was considered for the management of both cyclical and noncyclical breast pain.

OUTCOMES: Effective and timely management of the woman with breast pain and improved quality of.....

RECOMMENDATIONS:

1. Education and reassurance is an integral part of the management of mastalgia and should be the first-line treatment.
2. The use of a well-fitting bra that provides good support should be considered for the relief of cyclical and noncyclical mastalgia.
3. A change in dose, formulation, or scheduling should be considered for women on HRT. HRT may be discontinued if appropriate.
4. Women with breast pain should not be advised to reduce caffeine intake.
5. Vitamin E should not be considered for the treatment of mastalgia.
6. There is presently insufficient evidence to recommend the use of evening primrose oil (EPO) in the treatment of breast pain.
7. Flaxseed should be considered as a first-line treatment for cyclical mastalgia
8. Topical non-steroidal anti-inflammatory gel, such as diclofenac 2% in pluronic lethicin organogel, should be considered for pain control for localized treatment of mastalgia.
9. Tamoxifen 10 mg daily or danazol 200 mg daily should be considered when first-line treatments are ineffective.
10. Mastectomy or partial mastectomy should not be considered an effective treatment for mastalgia. (III E).

- TRIPLE ASSESSMENT TO EXCLUDE MALIGNANCY.
- REASSURE
- EPO – has been withdrawn from Medicines Control Agency

- 2 double blinded RCT –

Blommers J *et al.* Am J Obstet Gynaecol. 2002

Khoo SK *et al.* Med J Aust. 1990

- PHYTOESTROGENS (Soya Milk) some efficacy
- SECOND LINE TREATMENT –

- Tamoxifen 10mg daily – BUT NOT FDA APPROVED STILL AS AN INDICATION

- DB RCT using tamoxifen 20mg vs placebo

- 72% PAIN FREE AT 1yr. RECURRENT PAIN ONLY IN 25%. ADVERSE EFFECTS IN 21%

GEMB group Argentine. Breast. 1997

- Danazol 200mg daily. More side effects

- Tam 10mg vs Danazol 200mg – Tamoxifen superior

Kontostolis. Gyn Endo 1997

- Tamoxifen is not licensed for use in mastalgia in the US
- Bromocriptine use is rare due to high adverse effects (80%)

Breast. 2007 Oct;16(5):503-12. Epub 2007 May 16.

Evidence-based management of Mastalgia: a meta-analysis of randomised trials.

[Srivastava A](#), [Mansel RE](#), [Arvind N](#), [Prasad K](#), [Dhar A](#), [Chabra A](#).

University Department of Surgery, Cardiff University, UK.

Several agents have been utilised for therapy of mastalgia based on data from small trials.

Study was restricted to randomised controlled trials comparing Bromocriptine, Danazol, Evening primrose oil (EPO) and Tamoxifen with placebo.

Weighted mean difference in the pain score in favour of Bromocriptine was -16.31 (95% CI -26.35 to -6.27).

Danazol produced a significant benefit with a mean pain score difference -20.23 (95% CI -28.12 to -12.34).

EPO did not offer any advantage over placebo in pain relief, mean pain score difference being -2.78 (95% CI -7.97 to 2.40).

Tamoxifen achieved a relative risk (RR) of pain relief of 1.92 (95% CI 1.42-2.58).

Tamoxifen is associated with least side effects and should be the drug of first choice.

BREAST CYSTS

- 7% OF THE PATIENTS VISITING A BREAST CLINIC
- COMMON CAUSE FOR MASTALGIA
- MAJORITY ASYMPTOMATIC
- USS USEFUL FOR DIAGNOSIS AND TREATMENT
- SIMPLE / COMPLEX / CYST WALL PROJECTIONS COULD BE AN INTRACYSTIC PAPILLOMA OR CARCINOMA
- REASSURE / ASPIRATE. If blood stained should send for cytology.
- IF LUMP FELT AFTER ASPIRATION - Investigate

SCLEROTIC / FIBROTIC LESIONS

- STROMAL INVOLUTION PRODUCES FIBROSIS
 - SCLEROSING ADENOSIS (Painful mass)
 - RADIAL SCARS (Mammographic) - < 1cm
 - COMPLEX SCLEROSING LESIONS (Mammographic) - > 1cm

NON ANDI CONDITIONS

- BREAST INFECTIONS
- LACTATIONAL INFECTIONS
 - 5% OF PUERPERAL WOMEN
 - *Staphy. Aureus*
 - Diagnostic error as inspissated milk
- NON LACTATIONAL INFECTIONS
 - USUALLY ASSOCIATED WITH PERIDUCTAL MASTITIS.
(Young women with heavy smoking)
 - VERY RARELY IT COULD BE DUE TO UNDERLYING
COMEDO NECROSIS IN DCIS. HENCE MAMMO NEEDED
AFTER THE INFECTION HAS SETTLED
- POST SURGICAL INFECTIONS

HOW CAN WE MISDIAGNOSE THESE AS BENIGN

- PRESENTATION

- TRIPLE ASSESSMENT IS NOT 100%
- CLINICAL JUDGEMENT ERRORS. Eg. MASS MISTAKEN AS A FA, PAGET'S DISEASE, LACTATIONAL INFECTIONS AND INSPISSATED MILK.

- INVESTIGATION

- ATYPICAL HYPERPLASIA
- RADIAL SCARS, COMPLEX SCLEROSING LESIONS



**THANK
YOU**