CLINICO - RADIO - PATHOLOGICAL PROFILE OF BREAST DISEASES IN FEMALES ATTENDING SURGERY OPD IN COIMBATORE MEDICAL COLLEGE HOSPITAL

Dissertation submitted in partial fulfillment of regulation for the award of

M.S. DEGREE

in

GENERAL SURGERY (BRANCH I)

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY

CHENNAI

APRIL , 2014

COIMBATORE MEDICAL COLLEGE HOSPITAL

CERTIFICATE

This is to certify that this dissertation titled **"CLINICO-RADIO-PATHOLOGICAL PROFILE OF BREAST DISEASES IN FEMALES ATTENDING SURGERY OPD IN COIMBATORE MEDICAL COLLEGE HOSPITAL"** submitted to the TamilNadu Dr. M.G.R. Medical University, Chennai in partial fulfillment of the requirement for the award of M.S Degree Branch - I (General Surgery) is a bonafide work done by **Dr. B. Jayalakshmi**, post graduate student in General Surgery under my direct supervision and guidance during the period of November 2012 to November 2013.

Prof. S.SARADHA, M.S.,
Professor
Department of General Surgery
Coimbatore Medical College Hospital

Prof. V.ELANGO, M.S.,
Professor and H.O.D
Department of General Surgery
Coimbatore Medical College Hospital

Dr. VIMALA, M.D.,
Dean
Coimbatore Medical College Hospital

Coimbatore Medical College

COIMBATORE, TAMILNADU, INDIA - 641 014

(Affiliated to The Tamilnadu Dr. MGR Medical University, Chennai)

ETHICS COMMITTEE

CERTIFICATE

Name of the Candidate : DR. JAYALAKSHMI. B

Course : M.S. GENERAL SURGERY

Period of Study : 2011- 2014

College : COIMBATORE MEDICAL COLLEGE

Dissertation Topic : CLINICO-RADIO-PATHOLOGICAL PROFILE OF BREAST DISEASE IN FEMALES ATTENDING SURGERY OPD IN COIMBATORE MEDICAL COLLEGE HOSPITAL.

The Ethics Committee, Coimbatore Medical College has decided to inform that your Dissertation Proposal is accepted / ~~Not accepted~~ and you are permitted / ~~Not permitted~~ to proceed with the above Study.

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Place: Coimbatore

Date: **DR. B. JAYALAKSHMI**

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E-mail	jaykavinethra@gmail.com
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CHENNAI

ABBREVIATIONS

FNAC	-	Fine Needle Aspiration Cytology
HPE	-	Histo-Pathological Examination
OPD	-	Out Patient Department
ANDI	-	Aberrations of Normal Development and Involution
DCIS	-	Ductal Carcinoma In-Situ
LCIS	-	Lobular Carcinoma In-Situ
NST	-	Non-Specific Type
MRM	-	Modified Radical Mastectomy
QUART	-	Quadrandectomy, Axillary node dissection and Radio Therapy
RT	-	Radio-Therapy
USG	-	Ultrasonogram

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ABSTRACT

Breast diseases is a common problem among females. Due to the high increase in the incidence of breast cancer in India, it is mandatory to create awareness among the females. The common symptoms related to breast are pain, lump and heaviness of the breast.

In this study, 100 female patient of above 13 years of age of low socio economic groups attending the Surgery Out- patient Department of Coimbatore Medical College Hospital were studied. These patients had symptoms related to breast. Informed consent of the patients was obtained. They were subjected to the Triple assessment test consisting of clinical examination, radiological imaging and histopathological examination.

Based on this Triple assessment test analysis data, 74% of patients had benign lesions and 26% of patients had malignant lesions of the breast.

Off the 74% of benign lesions, fibroadenoma was the commonest lesion accounting for 41%, followed by fibrocystic disease of breast-17%, phylloides tumour-6%, fibroadenosis-4%, keratocyst of breast-3%, breast abscess-2%, fat necrosis-1%. The youngest patient in this study was 17 years old , who was diagnosed as fibroadenoma.

All the 26 patients who was diagnosed as malignant disease had Invasive Ductal Carcinoma of the breast of different grades. This shows the rarity of other types of malignant lesions. The eldest patient in this study group was 68 years old who was diagnosed as invasive ductal carcinoma.

Complete cure of the breast lesions, be it a benign or malignant, if diagnosed early, is possible. Hence screening and early detection play a vital role in alleviating the patients symptoms regarding breast. This study helps in creating awareness of the individuals for early detection and management of breast carcinoma. This study has a favourable effect in improving the outcome of women with breast lesions.

KEY WORDS:

Fibroadenoma, Fibrocystic disease, Phylloides tumour, Fibroadenosis, Keratocyst of breast, Invasive ductal carcinoma, Breast abscess, Fat necrosis.

INTRODUCTION

The incidence of Breast cancer is increasing worldwide. In India, it is the second most common malignancy[1] in women accounting for about 22.9%. This is next to carcinoma cervix uteri[2] which accounts for nearly 27%.

In our country, breast malignancy accounts for about 1/6th of the total mortality. There is about 1.4% annual incidence of this malignancy while there is a decreasing report in case of cancer cervix.

Breast diseases have a wide spectrum of categorisation [3] and there is also variations in their presenting complaints. Early malignant lesions can be diagnosed earlier by the newer radiopathological techniques and radical cure of the disease is possible.

Hence the awareness of the patient about the symptoms, screening and early diagnosis[3] of the disease will grossly change the outcome of the patients morbidity.

The Triple assessment which consists of clinical examination, imaging and FNAC/HPE provides a quick diagnosis and it alleviates the anxiety[4] of the patients with benign lesions and early management of patients with malignant lesions.

Since benign breast diseases and malignant lesions if diagnosed early, complete curative treatment is possible, early detection of breast diseases grossly reduce the morbidity and mortality in women.

HISTORICAL REVIEW

Breasts are considered by many females as a sign of feminity which are important to their sense of self. In early days of European civilization [5], the sculptures of women with exaggerated or prominent breasts were common. The organ was also famous in the Minoaon civilization in the form of the famous snake Goddess statuettes.

The Smith Surgical Papyrus (3000- 2500 B.C) [6] is the earliest to document breast cancer.

There was controversy about the surgical treatment of breast cancer throughout ancient times.

Hippocrates[7] argued that breast cancer was a systemic disease and that extirpation of the primary tumor made matters worse .

Galen believed that breast cancer was a systemic disease and proposed the `humoral theory to account for its pathogenesis.

In the eighteenth and nineteenth centuries, several surgeons promulgated more aggressive surgical approach to the treatment of breast cancer.

Jean Louis Petit (1674-1950), Director of the French Surgical Academy, first developed a unified concept for the surgical treatment of breast cancer [8]

The modern surgical treatment of breast cancer has its origins in the mid nineteenth century. Rudolf Virchow studied the morbid anatomy of breast cancer. He did not regard breast cancer as systemic at onset, but rather a local disease, amenable to cure with surgery.

In 1894, Halsted and Mayer established radical mastectomy.

In 1948, Patey and Dyson advocated a modified radical mastectomy.

In 1970, there was a change from the Halsteds radical mastectomy to the modified radical mastectomy [6].

ETYMOLOGY

The English word breast derives from the old English word breost (bosom) from the Proto Indo Europeon word bhreus[(5)] meaning to smell, to sprout.

AIM OF THE STUDY

Aims and objectives of the study.

- To study the profile of the breast diseases in females above 13 years of age of low socio-economic status attending Surgery OPD in Coimbatore Medical College Hospital.

- Early detection of proliferative lesions in these individuals.

- Any particular geographical variations in their occurence.

- To have a close follow up and careful watch about the development of invasive cancer.

REVIEW OF LITERATURE

EMBRYOLOGY

At about 5^{th} or 6^{th} week of intrauterine gestation, the mammary ridge or the milk lines appear as two thickened cord like ectodermal structures.They extend from the future axilla to the region of the future inguinal region.

The organ develops as an inpouch of the ectodermal tissues in a primary tissue embedded in the parenchyma. The primary bud starts the growth of 15 -20 secondary buds.

Epithelial cords develop from the secondary buds and penetrates into the surrounding mesenchymal tissues.

The major lactiferous ducts drain into a mammary pit. After proliferation of the mesenchymal tissues this mammary pit is transformed into nipple.

At the time of birth, the breasts of both males and females are indifferent. During the first week of birth there can be discharge from the nipple called witchs milk. This is secreted in response to the maternal oestrogens that cross the placenta.

At the time of puberty, the development takes place due to the effect of the ovarian estrogens and progestrone.

However, the development is complete only at pregnancy.

ANATOMY

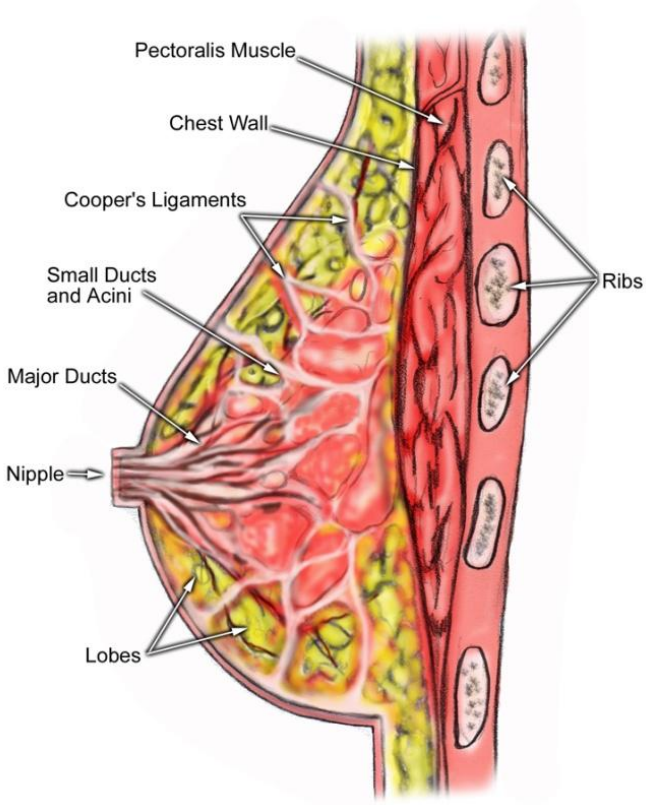
Breast occupies a large portion of the superior part of the thorax and it is appears as an eminence [8]. It extends laterally to a variable extent. Its shape and size are greatly determined by the genetic, racial and dietary factors and also the age, parity and the hormonal status of the individual.

Though large variations are seen, mostly it extends from the second to the sixth rib vertically. Horizontally, it is from the lateral part of the sternal margin medially to the mid axillary line laterally. The upper outer quadrant may extend into the axilla by piercing the deep fascia- the axillary tail of Spence.

The deep pectoral fascia lies posteriorly which in turn overlies the pectoralis major and the serratus anterior muscles superiorly and the external oblique muscle and its aponeurosis inferiorly.

A space called sub-mammary space which contains loose areolar tissue lies between the breast and deep pectoralis fascia. This space is responsible for the movement of the organ over its fascia.

Fig 1 . ANATOMY OF BREAST



Nipple

It is an elevation proximally from the centre of the organ. In majority of the individuals it occupies the 4th intercostal space although there may be variations.

Areola:

It is the hyperpigmented skin that is seen surrounding the pedicle of the nipple. The skin over the nipple areola complex has convoluted surface. They contain numerous sweat glands and sebaceous glands which gain access directly through the skin surface. Hair follicles are usually absent in the areola.

The hyperpigmentation seen in the nipple-areola complex is due to presence of numerous melonocytes and hence they appear darker comparative to their surroundings.

Soft tissue:

Breasts are composed of numerous lobes. These lobes has glandular structures consisting of branching ducts and secretory lobules which are embedded in the connective tissue stroma.

The functional milk secretory component is the terminal duct lobular unit. Numerous fibrous strands extend between the deep fascia of the thorax to the dermis.

These strands which are condensation of connective tissue are called Suspensory ligaments or the Astley Cooper ligaments.

Arterial supply:

Supplied by the branches of the axillary artery, the internal thoracic artery, and few intercostal arteries.

Axillary artery supplies through the superior thoracic artery, the pectoral branches of the thoraco-acromial artery, the lateral thoracic artery and the subscapular artery.

The perforating branches of the internal thoracic artery supplies the antero-medial region while that of 2nd, 3rd & 4th intercostal arteries supply the lateral part. The 2nd perforating artery is the largest of these.

Venous Drainage:

The venous drainage is to the internal thoracic and the axillary veins. Some occurs to the posterior intercostal vein which communicates to the internal vertebral venous plexus veins leading to metastatic spread to the bone[(9)].

Lymphatic Drainage:

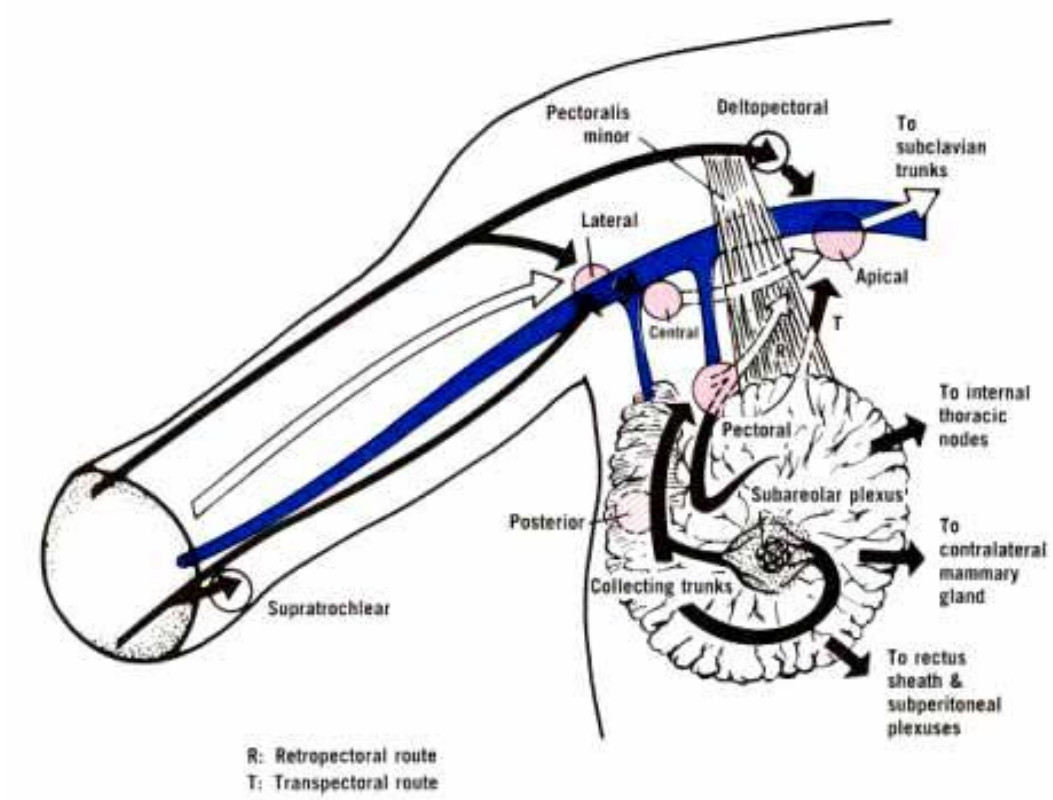
75% of the lymphatic drainage to the breast is to the axillary group of lymph nodes.

The axillary nodes are grouped as anterior, posterior, central and apical nodes. Most of the drainage is to the anterior group.

The inner quadrants drain into the parasternal nodes accompanying the internal thoracic artery. A few drains into the posterior intercostals nodes or the interpectoral nodes also called the Rotters nodes which lie between the Pectoralis major and minor muscles.

In case of obstruction of the major channels by malignancy, the drainage occurs to the minor channels. Direct drainage to the supra clavicular lymphnodes is also possible.

Fig 2. LYMPHATIC DRAINAGE OF BREAST



Levels of axillary nodes :

Level I : Below and lateral to the pectoralis minor muscle which comprises the anterior, lateral and posterior groups.

Level I I: Behind the pectoralis minor muscle – central group.

Level III : Above and medial to the pectoralis minor muscle -apical group of lymphnode.

Sentinel Lymphnode Biopsy:

The first lymphnode which drains the tumour area of the organ is defined as the "Sentinel lymph node"[11].

Sentinel lymphnode biopsy plays an important role in case of early stage breast cancer. It is used to determine the lymphnodes in case of early stage who are node negative clinically and by imaging modalities.

It is also useful in other conditions like tumors with multicentricity, older age, obese patients,male breast malignancy, DCIS with mastectomy, for detection of internal mammary lymphnodes and before to the use of pre –surgical chemotherapy management.

The radioactive colloid[11] is injected the day prior to surgery into either the subareolar tissue of the index quadrant of the breast or the peritumoral tissue or intraductal tissue near the primary tumor area. During surgery 3-5 ml of a vital blue dye is injected. Though any one method can be used to assess the sentinel node, many studies report that the combination of gamma probe detection of radioactive colloid and intraoperative utilisation of the blue dye is more sensitive and reliable, than depending on one method alone.

The sentinel node is surgically removed for careful histopathalogical examination to detect the presence of metastasis. If negative, the radical sugery can be avoided in that patient and hence reducing the morbidity associated with the axillary clearance.

The overall benefit of sentinel node biopsy is around 97.2%. The false negative value is 9.8% and this was influenced by the site of tumour,the type of diagnostic biopsy and the number of nodes excised during the surgery.

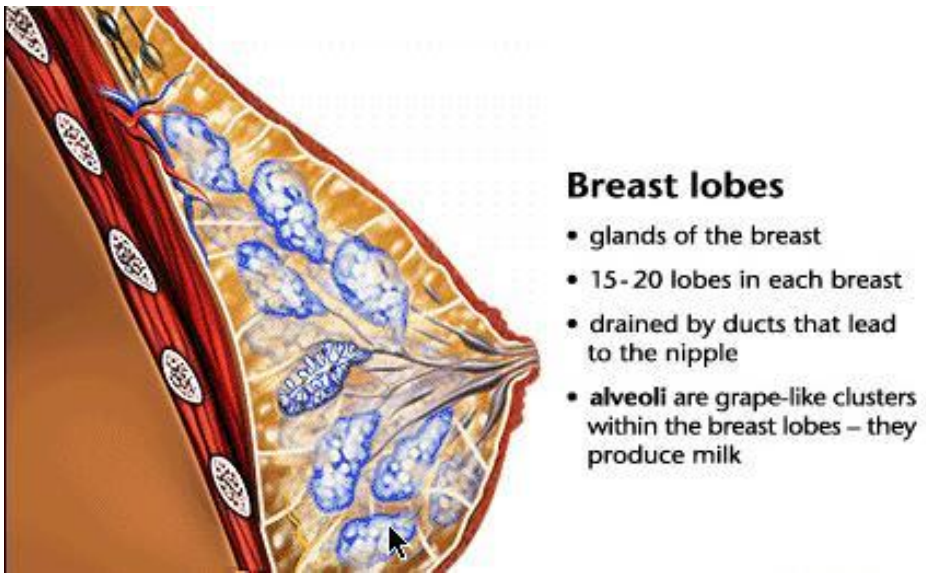
The complication of sentinel node biopsy are axillary seroma, haematoma in the dissected region, wound infection, paraesthesia over the axilla, restricted movement of the arm and lymphedema.

Some patients may be allergic to the dye leading to anaphylactic reactions.

PHYSIOLOGY:

The development of breast is dependent on the ovarian hormones estrogen & progesterone in the presence of pituitatory hormones. Large fluctuations in the hormones occur at puberty, during pregnancy and at the time of menopause. The growth of the ducts is dependent on estrogens, corticosteroids & pituitatory growth hormone. Prolactin plays a vital role in alveolar formation.

Fig 3. LOBES OF BREAST



During lactation , the breast is dependent on prolactin, growth hormone and cortisol. Oxytocin hormone liberated by the posterior pituaitory promotes prolactin release and stimulates the myoepithelial cells to eject milk into the main duct system and the lactiferous sinus. All these changes get reversed as a result of weaning.

Apart from pregnancy, the breasts of both nulliparous and multiparous women may produce milk which is termed galactorrhoea. This is mainly due to elevated levels of plasma levels of prolactin. This condition is different from nipple discharge which is a pathological condition. Differentiation requires assay of the fluid for milk proteins, lactalbumin and casein.

CLASSIFICATION OF BREAST DISEASES

Breast diseases are classified broadly into

1. Benign Disorders
2. Malignant Disorders

Benign Breast disorders classification:

1. Congenital disorders
    a. Amastia
    b. Polymastia
    c. Mastitis of Infants
2. Injury
    a. Haematoma
    b. Traumatic fat necrosis
3. Inflammation or infection
    a. Bacterial mastitis
    b. Tuberculosis of the breast

c. Actinomycosis of the breast

d. Hidradenitis suppurativa

e. Mondors disease

4. ANDI (Aberrations of normal development and involution)

a. Cystic diseases of the breast

b. Fibroadenoma

c. Fibroadenosis

5. Duct ectasia or periductal mastitis

6. Pregnancy related lesions.

a. Galactocele

b. Puerperal abscess

7. Diseases not related to breast

a. Sebaceous cyst

b. Lipoma

1. Congenital Disorders:

AMASTIA:

Refers to congenital absence of the breast. It may be unilateral or bilateral. It may be associated with Polands syndrome where there is congenital absence of the sternal portion of the pectoralis major.

POLYMASTIA:

It refers to the presence of accessory nipple. It may be in the axilla which is the commonest or the groin, buttock, and thigh.

MASTITIS OF INFANTS:

True mastitis is very rare and it is commonly associated with Staphylococcus aureus.

2. Injuries of the breast:

HAEMATOMA:

A resolving haematoma give rise a lump which may be very difficult to diagnose especially if an overlying bruising is not seen.

TRAUMATIC FAT NECROSIS :

This is common in an obese, middle aged female. They usually present with a painless lump. It may be caused by a trivial injury or due to an indirect violence to the pectoralis major.

It may mimic a carcinomatous lesion as the history of injury could not be elicited due to unawareness of the patient about the injury.

3. Infections and inflammatory disorders:

BACTERIAL MASTITIS:

They are usually associated with lactation.Staphylococous aureus is the most common organism involved.

Breast abscesses usually present with point tenderness, erythema and hyperthermia. The lactiferous ducts will become blocked by epithelial debris leading to stasis.

In acute cases, drainage by a circumareolar or incision parallel to the langerhans line is the management In chronic mastitis, broad spectrum antibiotics is the treatment.

Zuskas disease refers to recurrent periductal mastitis.

TUBERCULOSIS OF THE BREAST:

Rare disease. Usually associated with acute pulmonary tuberculosis or tuberculous adenitis. Healing is usually delayed and mastectomy is advised for persistent residual infection.

ACTINOMYCOSIS:

Rarer disease.

It is associated with fascio cervical actinomycosis.

HIDRADENITIS SUPPURATIVA:

This chronic inflammatory condition may affect the nipple-areola complex or axilla.

The differential diagnosis are other chronic inflammatory conditions, pagets disease of the nipple or invasive breast cancer.

Treatment is with antibiotic, incision and drainage of the lesion.

MONDORS DISEASE:

It is the thrombophlebitis of the superficial veins of the anterior chest wall and the breast.

It was described by Mondor as “string phlebitis”. The thrombosed vein present as a tender, cord like structure and when the skin is stretched it presence as a groove.

The veins commonly involved are the internal thoracic vein, thoraco-epigastric vein or the superficial epigastric vein. It is a self limiting disorder.

Treatment consists of assurance, warm compression, anti inflammatory drugs and avoiding the mobility of the arm.

4. ANDI : (Aberrations of Normal Development and Involution)

It is a new system of nomenclature of benign breast diseases described by the Cardiff Breast Clinic.

It includes fibrocystic disease, fibroadenosis, chronic mastitis and mastopathy. It includes all aspects of the breast condition including pathogenesis[13] and the degree of abnormality.

Pathogenesis of “ANDI” varies from normal to well-defined disease processes.

Pathology of ANDI :

The disease comprises of varying degrees and extent of the following pathology.

- Cyst formation
- Fibrosis
- Hyperplasia of epithelium
- Papillomatosis

Clinical Features of ANDI :

The patients mainly present with symptoms of discrete lump, lumpiness and or pain (mastalgia).

Discrete lump is usually seen in a cyst or a fibroadenoma.

Lumpiness may be unilateral or bilateral. It usually affects the upper and outer quadrant. The symptom may be cyclical with both pain and lumpiness in the prementural period.

Non cyclical mastalgia is common symptom of ANDI or periductal mastitis. It is common in the perimenopausal stage.

After excluding malignancy, the treatment for mastalgia consists of assurance, support of the organs by firm bra during the day and a softer one at night and to avoid caffeine. If these fails, medications consists of Evening primrose oil or Danozal 100 mg t.d.s.

FIBROCYSTIC DISEASE OF BREAST

Fibrocystic breast disease is a condition causing breast pain, cysts and non cancerous breast lumps, affecting many women. It is also known as fibroglandular changes, fibrocystic changes, chronic cystic mastitis, mammary dysplasia or benign breast disease. It is characterised by the presence of lumps in the breast which cause discomfort to the patient. They are often periodically related to the hormones from the menstural cycle.

These benign masses are usually smooth with well defined edges and are freely mobile. They usually occupy the upper and outer quadrant of the breast. Patients have an intermittent aching pain or breast tenderness related to periodic swelling. The symptoms are usually periodic in nature and they present mainly in the premenstrual time. Symptoms tend to peak just before the menstrual time and decreases afterwards. At the premenstrual stage the breasts may be full and swollen.

The exact etiology is unknown. Hormones play a role as the condition usually subsides after menopause and it is also related to the menstrual cycle. The most important of these hormones are oestrogen, progesterone and prolactin. These hormones are involved in the hyperplasia of the cells in the breast tissue. Several variants of fibrocystic breast changes may be distinguished according to their etiology and genetic predisposition.

Diagnosis is primarily done by the symptoms and on clinical diagnosis. Fluid aspiration can be used to classify the fluid type.

Treatment is rarely needed for this condition with no symptoms, but closer follow-up should be advised. In the presence of symptoms the treatment consists of assurance, advice to wear firm bra, oral or topical analgesics, Evening primerose oil and in retractable conditions treated with Danazol 100mg t.d.s. There is usually no adverse side effects to this condition. In most cases, it subsides after menopause.

BREAST CYSTS:

This is common in the middle aged females. It may be multiple and also bilateral. It is diagnosed by ultrasound and or aspiration. Treatment comprise of aspiration of the cystic fluid. The two criteria to

diagnose as simple cysts are complete regression of the size after aspiration and absence of blood stained fluid. In case of doubt, cystadenocarcinoma should be ruled out which is common in postmenopausal women.

FIBROADENOMA:

It is the most common benign disease in young individuals. It is common in the age group of 15 to 25 years. It is usually a self limiting lesion. It is due to hyperplasia of a single lobule. It is well encapsulated.

Fibroadenoma are lumps which are composed of both fibrous and glandular tissue. They are also called breast mouse or breast mice due to their high mobility within the breast tissue. They present as a painless, solitary, firm, mobile, slowly growing masses. They are usually diagnosed by clinical examination, radiology and often by the needle biopsy of the lump.

Fibroadenomas arise in the terminal duct lobular unit of the breast. They commonly occur in adolescent women. The incidence declines with increase of age. Fibroadenomas are partially hormone dependent and frequently regress after menopause. They are hypovascular compared to malignant tumors.

Macroscopically they are usually less than three cms in diameter. It can be round or ovoid, elastic and nodular. It has smooth surface. The cut section of the fibroadenoma mass appears firm and homogenous and they are gray-white ot tan in colour. The pericanalicular type has complete capsule while the intra canalicular type has an incomplete capsule.

Microscopically they are composed of two elements- epithelium and stroma. Depending on the proportions of the presence of these tissues they are classified as intra-canalicular fibroadenoma and peri-canalicular fibroadenoma.

In the intracanalicular fibroadenoma, there is predominance of the stromal proliferation which compresses the duct, which are irregular and reduced to slits. In the peri-canalicular type, there is predominance of fibrous stroma that proliferates around the ductal spaces, so that they appear oval or round on cross section.

Confirmatory diagnosis is made by ultrasonography[(14)] .

The mainstay of treatment is conservative. The patient should be assured. Most of the excision of fibroadenomas in young individuals are done just to alleviate patient concern.

Most of the fibroadenomas can be left in-situ and the patient should be followed up. But some need treatment by surgical excision which consists of complete excision of the mass. Recurrence rate is very low following complete excision.

Giant fibroadenomas are those of more than 5cm in diameter. They can be enucleated by a submammary cosmetically acceptable incision.

Recent trend in the management of fibroadenoma consists of echotherapy which uses high intensity focused ultrasound to destroy the fibroadenoma cells. This is a non-invasive technique. Also cryoablation which uses extreme cold to destroy tissue of the fibroadenoma is also tried for fibroadenoma management. This is a safe, effective and minimally invasive technique alternative to open surgical excision

5. Duct ectasia or periductal mastitis

This is common in smokers. It is due to dilatation of the lactiferous duct which cause stagnation of the secretion in these dilated ducts. This may discharge. This discharge can irritate the surrounding structures leading to periductal inflammation. This inflammation may be severe that it can lead to abscess or fistula formation.

The common presenting symptoms are nipple discharge with or without nipple retraction, a painful and tender small areolar mass, an abscess or a fistula.

If conservative management fails, the treatment consists of adfields operation which comprises of excision of all the major ducts. Zuskas disease is a special entity which refers to recurrent periductal mastitis.

MASTALGIA

Mastalgia also called as mastodynia or mammalgia is a medical term of breast pain. The severity of breast pain may vary from a minor discomfort to a severely incapacitating pain.

Mastalgia is classified into two main clinical patterns.

1. Cyclical mastalgia when the intensity of pain changes to the menstrual cycle.

2. Non-cyclical mastalgia when there is no change in pain to the menstrual cycle.

Cyclical mastalgia is often associated with fibrocystic disease of breast or duct ectasia. It is due to the hormonal changes mainly due to the response of prolactin to thyrotropin. However some degree of cyclical breast tenderness is normal in the menstrual cycle.

Non-cyclical breast pain can be due to hormonal changes in puberty, in menopause and during pregnancy. Breast pain is also common during lactation. Other conditions causing non-cyclical mastalgia are alcoholism with liver damages, mastitis and medications like digitalis, methyl dopa, spironolactone, certain diuretics, chlorpromazine, etc.

Treatment for cyclical mastalgia consists of systemic and topical application of Non-steroidal anti inflammatory drugs, progesterone, dopamine agonists, iodine, danazol, tamoxifen and ormeloxifene. The treatment for non-cyclical mastalgia varies according to its etiology.

6. Pregnancy related breast diseases:

It includes Galactocele and puerperal abscess.

GALACTOCELE

It presents always during the lactation period. It is a rare condition. It mostly manifests as a solitary cyst in the sub-aeriolar region. The content is milk. In chronic cases, there occurs calcifications of its walls.

PUERPERAL ABSCESS

It occurs due to mastitis caused mainly due to the methicillin resistant staphylococcus aureus that gets entry by the suckling neonate. There occurs pain, cracks or fissures in the nipple with stasis of milk. The management consists of stoppage of breast feeding, antibiotics and drainage if necessary.

PHYLLODES TUMOUR:

The earlier nomenclature is serocystic disease of Brodies or cystosarcoma phyllodes[6].

It commonly presents above the age of 40 years.

It is classified into benign, borderline or malignant.

The borderline variety is prone for recurrence.

Based on their pathological status, they show a wide range of variations resembling that of fibroadenoma to that of malignancy.

These tumours are sharply demarcated from the surrounding normal tissues. The tumour present as a large mass with a bosselated, uneven surface. The tumours show a mixed gelatinous, solid and cystic areas.

Grossly, the cut section have the classical leaf like structure (phyllodes).The tumour present as a large mass with a bosselated, uneven surface.

Due to the pressure of the tumour there may be necrosis leading to ulceration of the underlying skin.

The treatment in case of benign and borderline types is excision of the tumour with a margin clearance of 1cm. In case of malignant variety, massive sizes and recurrent lesions the treatment is mastectomy. The mode of metastases is via blood stream. Lymph node metastases is very rare and hence no role of axillary lymph node clearance in these cases.

CARCINOMA BREAST

It is the second most common cause of death in females in India[1]. Its incidence rate is on an increasing level as compared to other malignancies.

It is common in the upper outer quadrant of the breast.

Etiological factors:

1. Age : 40- 60 years.

2. Breast Cancer Syndromes:

    - Li- Fraumeni syndrome

    - Cowdens disease.

    - Ataxia Telangectasia.

3. Chromosomal abnormalities:

    - BRCA 1 gene mutation.

    - BRCA 2 gene mutation.

    - HER 2 mutation.

    - P53 mutation.

4. Diet :

- Alcohol

- Saturated fats

5. Endocrine causes:

- Koreman’s Hypothesis:

Unopposed oestrogen with no progesterone that is present in early menarche and late menopause leads to anovulatory cycles. Hyperprolactinemia is inhibited in early childbirth.

Increased incidence of Breast cancer is seen in:

1. Early Menarche.

2. Late Menopause.

3. Late Child birth.

4. Hormone replacement therapy.

5. Absent Breast Feeding.

6. Family History of :

- Familial Breast Cancer.

- Sporadic Breast Cancer.

- Hereditary Breast Cancer.

TYPES OF BREAST CANCER:

I. CARCINOMA In-Situ:

1. Ductal Carcinoma (DCIS)

a. Comedo.

b. Intermediate.

c. Non-Comedo

- Solid

- Cribriform

- Papillary

2. Lobular Carcinoma (LCIS)

II. INVASIVE CARCINOMA:

1. Pagets disease of Nipple.

2. Invasive Ductal Carcinoma.

- Adenocarcinoma with productive fibrosis 80%

(Scirrhous, Simple, NST).

- Medullary Carcinoma 4%
- Mucinous (colloid) Carcinoma 2%
- Papillary Carcinoma 10%

3. Invasive Lobular Carcinoma 10%

4. Rare Types:

- Adenoid cystic carcinoma
- Squamous cell carcinoma
- Apocrine carcinoma
- Sarcomas
- Lymphomas

BLOOM & RICHARDSON'S GRADING

Grading of Carcinoma Breast is based on

1. Number of Mitosis (1-3).
2. Nuclear Pleomorphism (1-3)
3. Tubule formation (1-3)

Low Grade: 3 – 5

Egs: Tubular, Mucinous types.

Intermediate Grade: 6 – 7

Egs: Medullary, Lobular types

High Grade: 8 – 9

Egs: NOS types.

TNM STAGING OF BREAST CARCINOMA

Primary Tumor (T)

T0 - No evidence of primary.

Tis - Carcinoma in situ

Pagets disease of Nipple with no mass palpable.

T1 - Tumor < 2cm in greatest dimension.

T2 - Tumor > 2cm but < 5cm in greatest dimension.

T3 - Tumor > 5 cm in greatest dimension.

T4 - Tumor of any size with extension to chest wall or skin.

T4a - Extension to chest wall, not including pectoralis muscle.

T4b - Edema (Peau d'orange), ulceration of the skin of the breast and satellite skin nodules.

T4c - Both T4a and T4b.

T4d - Inflammatory carcinoma.

Regional Lymph nodes (N).

NX - Regional lymph nodes cannot be assessed.

N0 - No regional lymph node metastasis.

N1 - Metastasis to movable ipsilateral axillary lymph nodes.

N2a - Metastasis to ipsilateral axillary nodes fixed to one another or to other structures.

N2b - Metastasis to clinically apparent ipsilateral internal mammary nodes in the absence of clinically evident axillary nodes.

N3a - Metastasis in ipsilateral infra clavicular lymph node with or without axillary nodes.

N3b - Metastasis in ipsilateral internal mammary nodes and axillary nodes.

N3c - Metastasis in ipsilateral supraclavicular lymph nodes with or without axillary or internal mammary nodes.

Distant Metastasis (M)

MX - Distant metastasis cannot be assessed.

MO - No distant metastasis.

M1 - Distant metastasis

TNM STAGE GROUPINGS

Stage I	-	T1 N0 M0
Stage IIA	-	T0 N1 M0; T1 N1 M0; T2 N0 M0
Stage IIB	-	T2 N1 M0; T3 N0 M0.
Stage IIIA	-	T0 N2 M0; T1 N2 M0; T2 N2 M0;
		T3 N1 M0; T3 N2 M0.
Stage IIIB	-	T4 N0 M0; T4 N1 M0; T4 N2 M0.
Stage IIIC	-	AnyT N3 M0.
Stage IV	-	AnyT AnyN M1.

TREATMENT MODALITIES

1. Total Mastectomy:

- It consists of removal of all breast tissue, nipple-areolar complex and skin.
- Prophylactic Mastectomy done in case of BRCA 1& BRCA 2 mutations.
- Palliative mastectomy is a type of simple mastectomy in cases of ulcerated Carcinoma breast.
- Extended total mastectomy consists of removal of all breast tissue, nipple-areolar complex, skin,level I axillary nodes.

2. Modified Radical Mastectomy (MRM):

- It refers to removal of all breast tissue, nipple-areolar complex, skin, level I & level II axillary nodes.

  - Pateys modification:

Consists of division and removal of Pectoralis minor along with Levels I, II, and III lymph nodes.

- Auchincloss modification:

Here the Pectoralis minor removed supero medially and Level I & II nodes only are removed.

- Scanlon modification:

In this type, the tendon of the Pectoralis minor muscle is divided at its insertion at the coracoids process and put it back after removal of the Level I , II, III Lymphnodes.

The following strctures are preserved in Modified Radical Mastectomy

- Axillary vessels
- Bells nerve
- Cephalic vein
- Nerve to Latissimus dorsi
- Pectoralis major.

The advantages of MRM over Radical type are:

- The shoulder function is preserved.
- Pectoralis major is preserved, hence a good vascular bed for skin flap.
- Cosmetically acceptable as the axillary fold is preserved.

3. Radical mastectomy

Halsteds Radical Mastectomy:

- Consists of removal of breast tissue with nipple- areolar complex and Level I, II, III lymph nodes.Also the following structures are removed.
- Pectoralis Major
- Pectoralis Minor
- Part of Serratus anterior
- Latissimus dorsi
- Subscapularis
- Few fibres of the External oblique muscle
- Upper part of Rectus abdominis.

The following structures are preserved:

- Axillary Nerves
- Bell's Nerve
- Cephalic vein.

Disadvantages:

- Mutilating surgery.
- No bed for reconstruction.
- Lymphedema of arms more common.
- Poor cosmetic results.

BREAST CONSERVATIVE SURGERY

- It involves the following procedure.
    - Removal of the tumor with a wide margin.
    - Adjuvant radiotheraphy.

The various surgical procedures employed are:

- Segmental excision.
- Lumpectomy
- QUART (Quadrantectomy, Axillary node dissection and Radio Therapy).

Indications:

- When the lesion is solitary.
- Possible to excise the tumor with tumor free margins, without disrupting the tissues cosmetically.
- No contraindications to radiotherapy (Eg.Pregnancy, Collagen vascular disorders, prior RT to same breast).

Contraindications:

- Presence of two or more lesions in separate areas.
- Diffuse malignant appearing calcification.
- History of prior radiation to breast.
- Residual tumor, despite repeated resections.

- Multicentricity.
- Inflammatory breast cancer.
- Radiation therapy not possible.
- Pregnancy in first and second trimesters.
- Collagen vascular disorders.
- Large tumor in a small breast.
- Excision leading to cosmetically unacceptable.
- Patients choice.

The main aims of breast conservative therapy[15] are

- To reduce the amount of surgical impact on the patient.
- to preserve a natural, good looking breast.
- Efficient local treatment in regard to local control-free margins and prophylactic radiation therapy will guarantee the best possible success.

Radiotherapy is an integral part of breast conservative therapy. It is critical to apply the necessary additional and prophylactic radiotherapy after the surgical procedures.

PROPHYLACTIC MASTECTOMY

The indications for prophylactic mastectomy[15] of the contralateral breast are

- Germ line BRCA1 and BRCA 2 mutations.
- Strong family history of breast cancer with negative genetic testing.
- Dense breasts that are difficult to image and examine.
- History of multiple prior biopsies with pathology demonstrating proliferative changes with atypia.
- Young age at diagnosis.
- Patients who desire to avoid a second cancer.

CLINICAL EXAMINATION

INSPECTION :

Postures of examining the breasts are :

- Arms by the side of the patient.
- Arms raised up in the air.
- Hands on the hips
- Alternating relaxation and contraction of the pectoralis muscle.

The symmetry, size and shape of the breast are noted and any presence of edema (Peau d'orange)[6], retraction of skin or nipple or presence of erythema are recorded. Skin retraction is noted by asking the patient to lean forward with arms extended forward while sitting.

PALPATION :

Palpation of the breast is done in the supine position with a pillow to support the ipsilateral hemithorax. All the quadrant of the breast are palpated gently with the palmar surface of the fingers.

Palpation of the axillary nodes is done by supporting the arm and the elbow this stabilising the shoulder gridle. All the three levels of lymphnodes are palpated gently. This is followed by palpation for the supraclavicular and parasternal lymphnodes.

PERCUSSION :

This is usually done to find for the presence of internal mammary lymphnodes.

IMAGING MODALITIES

- **MAMMOGRAPHY**

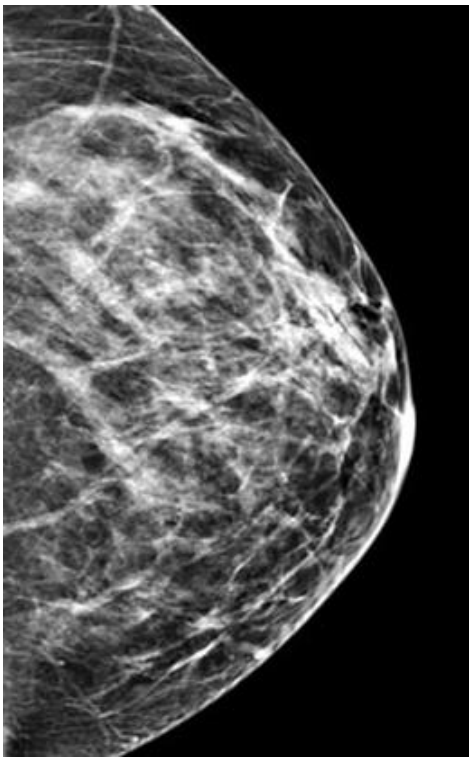
It is a plain X ray of the soft tissue using low voltage and high ampereage X-rays. The two views are

1. Cranio caudal and

2. Mediolateral oblique.

It delivers a radiation dose of 0.1 centi Gray cGy per study compared to an X-ray chest which delivers only 25% of this dose.

Fig 4. NORMAL MAMMOGRAM - I



Indications:

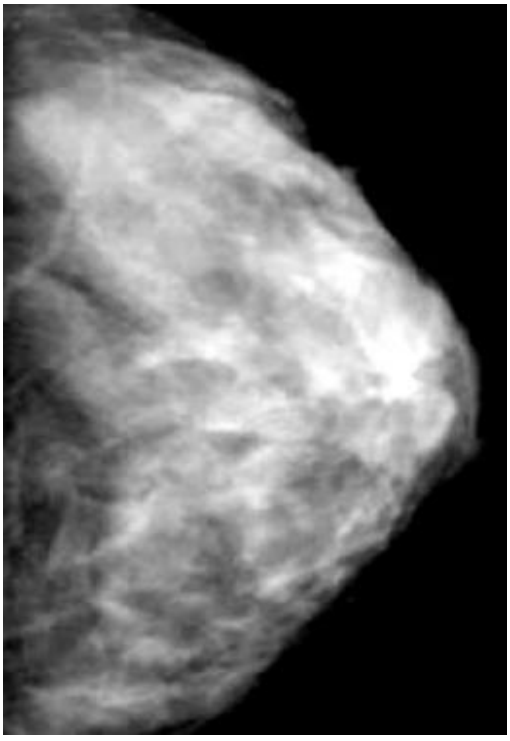
1. For screening purpose above the age 50yrs or 40 yrs with risk factor.
2. In obese patients.
3. Already operated for one side.
4. When conservative surgeries are planned to rule out multifocal involvement.
5. To find out the spread in the opposite breast.
6. Mammography guided biopsy.
7. As a follow-up in benign breast disease with malignant potential.

Findings in case of benign diseases, the soft tissue shadow may be smooth and of regular margin. In malignancy, irregular margins are seen.

Findings relevant to cancer are:

1. Asymmetry
2. Presence of speculation.
3. Architectural distortion.
4. Mass effect.
5. Branching calcification
6. Clustering
7. Micro calcification

Fig 5. NORMAL MAMMOGRAM - II



Grading in Mammography :

Grade I : Negative

Grade II : Benign lesion

Grade III : Probally benign lesion

Grade IV : Suspicious of malignancy

Grade V : Breast carcinoma.

- **ULTRASONOGRAPHY:**

Ultrasonography of the breasts are done in screening of young females[14], when the mammographic results are equivocal, to define a cystic swelling and to specify the qualities of a solid mass.

Breast cysts have smooth contours, hypoechoic lesions and well-defined margins.

Malignant lesions have irregular walls with acoustic enhancement.

Advantages of ultra sound:

- Used to guide for fine- needle aspiration biopsy and core-needle biopsy.
- Reports are highly reproducible.
- Acceptance rate of the patient is high.

Disadvantages:

- It may not detect lesions less than 1cm in diameter.

- **MAGNETIC RESONANCE IMAGING:**

It remains a problem solving tool in breast imaging – to evaluate breasts with implants, detect recurrence and assess the breasts of patient with involved axillary nodes.

It can also demonstrate axillary metastatic disease. Recently, it is gaining interest to screen individuals with a very strong family history of breast malignancy. It is done in patients of known breast cancers to find the presence of controlateral breast lesions.

- **POSITIVE EMISSION TOMOGRAPHY:**

It is a non invasive method of staging the axilla. It involves the administration of a positron- labelled metabolic substrate intravenously which selectively accumulates in tumor cells compared to normal cells. Fluro-2-deoxy-D-glucose is the radio pharmaceutical agent commonly used. This technique is developing rapidly; However it is expensive and not widely available. Its results are promising, showing a sensitivity of 75% and a specificity of 90% in recent studies.

BREAST BIOPSY

FINE NEEDLE ASPIRATION BIOPSY:

Fine needle aspiration cytology has become a popular, valuable tool in the pre operative assessment of breast masses and it shows high accuracy, sensitivity and specificity.

Because of its fast and easy approach it has gained a very popular role in the diagnosis of breast lesion. It is also inexpensive and can be done with minimal complications. FNAC plays a major role in differentiating benign and malignant lesions. It plays a vital role in the time honoured Triple assessment tests in the evaluation of breast masses.

Nevertheless, in FNAC of breast lesions, differentiation of benign and malignant lesions may not be possible. This arises due to paucity of the sampling specimen or when there is a morphological overlap between the benign and malignant lesions as in atypical hyperplasia and low grade carcinoma in-situ or in papillary lesions. To accommodate these problems, cytological reporting categories are formulated. The most commonly used categorization is the five-tier system.

C 1 - Insufficient sample

C 2 - Benign

C 3 - Atypical

C 4 - Suspicious of malignancy

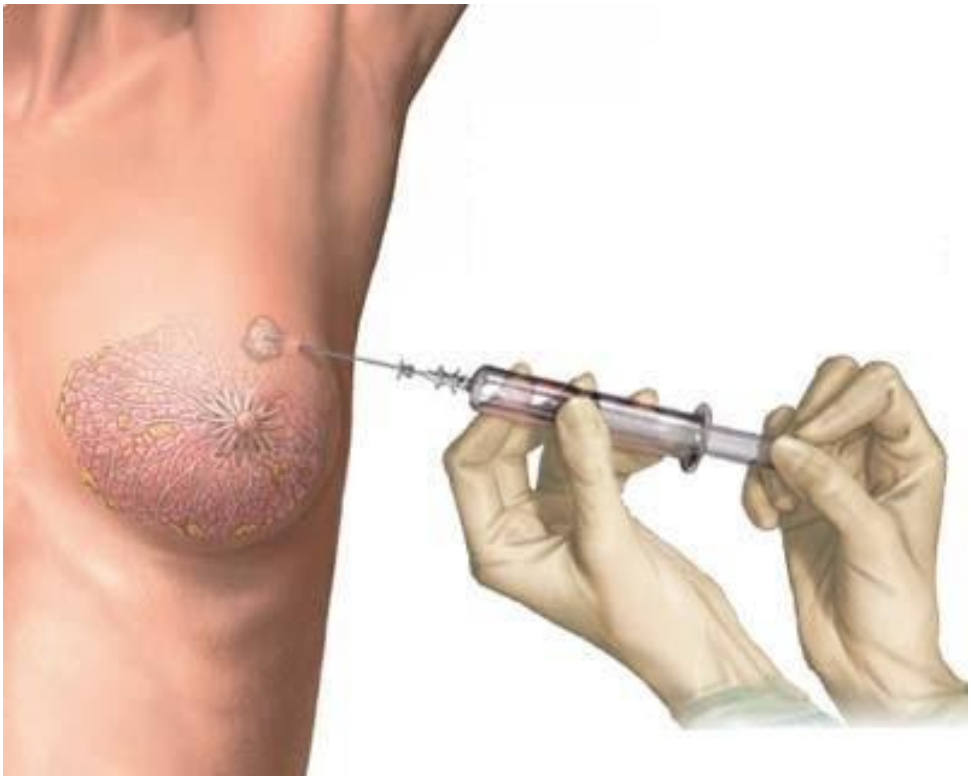
C 5 - Malignant

Benign breast lesions are usually easy to diagnose due to their obvious characteristic of the cytologic patterns. Hypocellularity, degenerated apocrine cells, necrosis and epithelial hyperplasia are some of the factors leading to difficulty in evaluating the smear, due to morphological overlap between the benign and malignant lesions.

The false-negative rate though very less is due to poor sampling technique and poor localisation of the tumor. Small tumor size and non palpable breast lesions are also commonly associated with false-negative and aspirate inadequacy.

Procedure :

Fig 6. FNAC PROCEDURE



This is done in cases of palpable mass lesions[12]. A 22 gauge needle fitted to a 10 ml syringe is used. The mass is fixed with one hand. With the other hand, the needle is introduced into the mass and suction is applied while the needle is moved to and fro over the lesion.

Now the cellular material is expressed onto microscopic slides.

Fixation can be done either by air- free or by using 95% ethanol. It is a simple, safe and an out-patient procedure[16, 17].

CORE-NEEDLE BIOPSY :

It is done in case of small lesions and clinically non-palpable lesions by means of image guidance. It provides information about the tissue architecture and whether the lesion is of invasive or not. In palpable lesion, it is performed using the 14 gauge needle, like Tru-cut needle. Tissue specimens are placed in formalin and then processed to paraffin blocks.

MATERIALS AND METHODOLOGY

MATERIALS AND DESIGN

Study design :

It is a prospective study. The research population includes all females above 13years of age, of low socio-economic status, attending surgical OPD of Coimbatore Medical College Hospital.

Sample size:

100 patients.

Inclusion criteria:

All female patients of age greater than 13 years, of low socio-economic status with symptoms related to breast were included in the study.

Duration of the study :

One year (November 2012 - November 2013).

Personnel:

Surgeons of all units in Department of General Sugery.

Pathologist

Radiologist

Nursing staff

METHODOLOGY

It is a prospective study.100 female patients above the age of 13 yrs, of low socio economic status with symptomatic breast disease attending the General Surgery Out patient Department of Coimbatore Medical college Hospital were studied.

Informed consent of the patient was obtained. Detailed history of the patient was recorded. The patient was subjected to Triple assessment through clinical examination, imaging techniques comprising of USG, Mammogram and histopathological studies[18].

The safety of the patient is foremost. They are subjected to minimal radiation exposure and invasive procedure.

The duration of the study was from November 2012 to November 2013.

A complete statistical analysis of the patient was done. The patients data, mammography/ USG of breast findings and Fine Needle Aspiration Cytology or histopathology reports were collected. These datas and reports were arranged on a dedicated spread sheet for personal computer input and subsequent analysis.

Quality Assurance:

All the study group females were assessed by the surgeons clinically.

In case of doubt or expert opinion, the guidance and opinions of my Professors was obtained.

Mammography or Breast ultrasound reports were given by the radiologist. To prevent any observers bias, a second opinion was obtained by another radiologist. The FNAC and Histopathological reports given by the pathologists were also verified by the second pathologist to avoid observers bias.

OBSERVATION AND RESULTS

This study on the clinico-radio-pathological profile of breast disease was undertaken in a random of 100 female cases in a period of one year from November 2012 to November 2013.

The study group included the females above 13 years of age of low socio-economic status who attended the surgical Out Patient Department of the Coimbatore Medical College Hospital.

In this study the main presenting complaints of these patients were pain,presence of lump or heaviness of the breasts.Most of the younger patients presented earlier for clinical examination compared to the elder patients. This shows that the young females are more aware of the symptoms related to breast and they are self motivated in seeking clinical examination.

First of all by this study, the patients gained confidence by the assurance and counseling given by us about the advantages of breast screening.

A complete analysis of the datas obtained by the triple assessment of these 100 patients was made. The lesions were categorized broadly into benign and malignant. Then the incidence of each type of lesions were categorized individually.

The following statistical reports were obtained .

Benign lesions - 74%

Malignant lesions - 26%

Fig 7. PERCENTAGE OF BENIGN AND MALIGNANT LESIONS

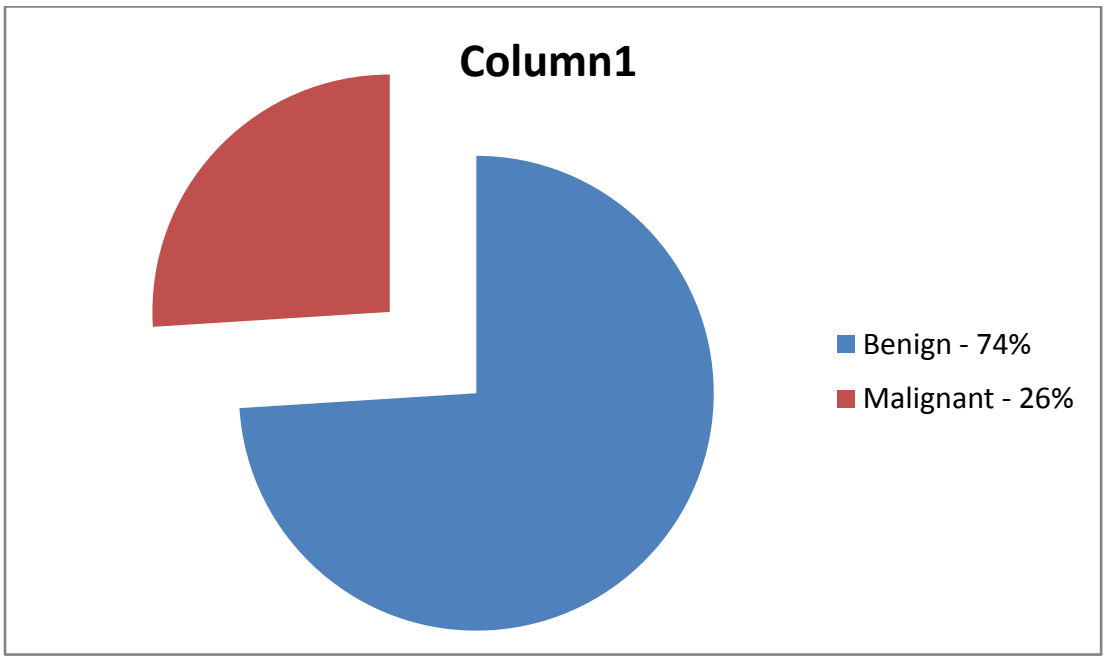
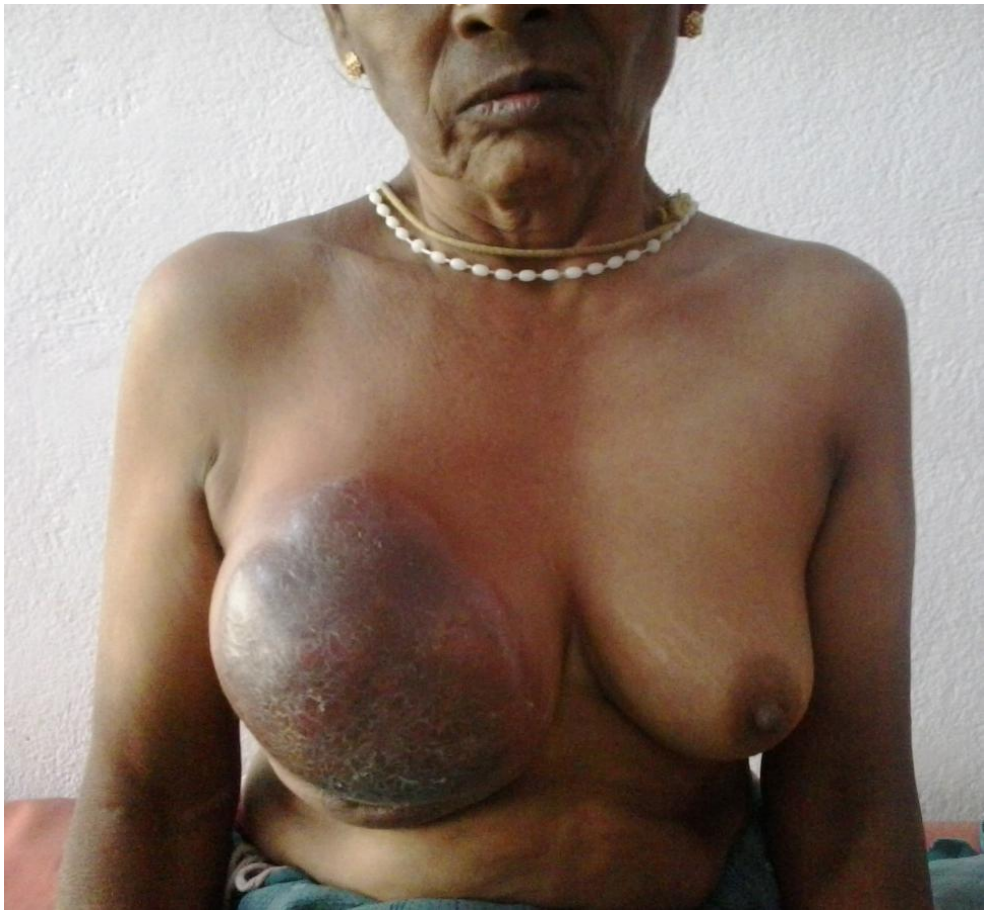
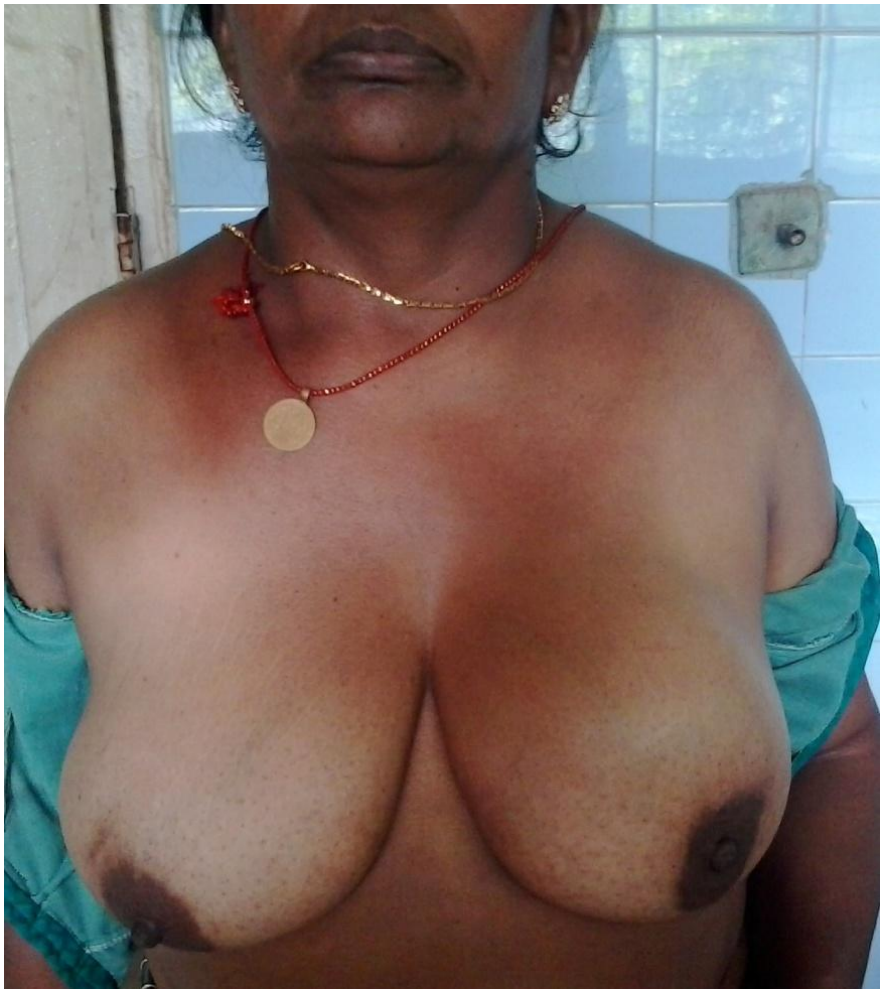


Fig 8. A CASE OF DUCTAL CARCINOMA- RIGHT BREAST



In this study, the benign lesions were more common in the younger individuals while the malignant lesions showed increase incidence in the elderly individuals. There is an increase in the incidence of malignant lesions of the breast.

Fig 9. A CASE OF FIBROADENOMA –LEFT BREAST



Off the benign lesions, the following results were obtained of which Fibroadenoma which accounted for 41 % was the commonest lesion.

Fig 10. A CASE OF PHYLLOIDES TUMOR- LEFT BREAST

Fig 11. A CASE OF KERATOCYST OF BREAST- LEFT SIDE

Percentage of benign lesions

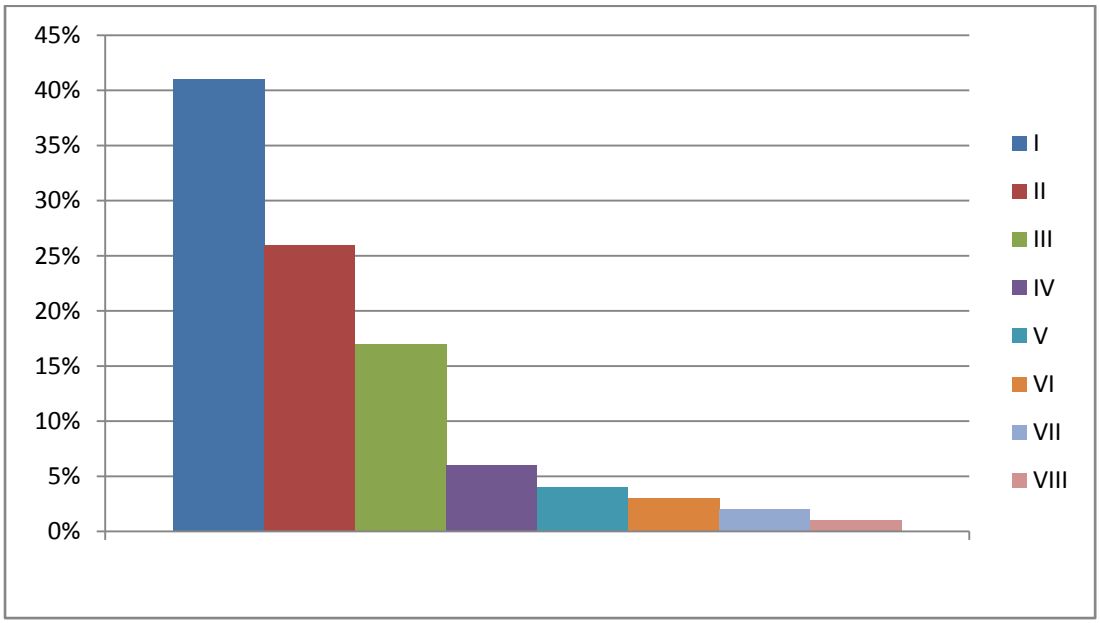
Fibroadenoma	–	41%
Fibrocystic disease	–	17%
Phylloides tumour	–	6%
Fibroadenosis	–	4%
Keratocyst	–	3%
Breast abscess	–	2%
Fat necrosis	–	1%

This confirms the commonest presentation of fibroadenoma among the benign lesions.

In this study, the malignant lesions accounted for 26%. All of these malignant lesions were of the invasive ductal carcinoma type, however , of different grades. This confirms the rarity of other types of breast malignancy.

There was no particular geographic variations in the incidence of either benign or malignant breast lesions.

Fig 12. PERCENTAGE OF VARIOUS BREAST DISEASES



I. FIBROADENOMA; II. INVASIVE DUCTAL CARCINOMA; III. FIBROCYSTIC DISEASES; IV. PHYLLOIDES DISEASE ; V. FIBROADENOSIS ; VI. KERATOCYST ; VII. BREAST ABSCESS ; VIII. FAT NECROSIS

All the 100 study groups were advised curative procedures in cases of possibilities and for a regular follow-up. In cases of inoperable malignant lesions, they were given palliative measures and advised for regular follow up and further management.

All the 26 patients with malignant lesions were advised a screening examination of their first degree relatives for early diagnosis and management.

DISCUSSION

Since Carcinoma breast is increasing in its incidence world wide and in our country, this study will create an awareness of the females in this region. It will motivate the patients friends and their relatives to have a screen done to rule out breast pathology. A complete cure of the lesions, be it a benign or a malignant if diagnosed early is possible. This study helps in seeking awareness of the individuals for early detection and management.

For centuries, management of breast cancer was predicated on anecdotal experience and the results of retrospective studies. Now, it is largely based on the results of randamonized, prospective clinical trails. These trails have shown that screening, adjuvant systemic therapy, and adjuvant radiotherapy can reduce breast cancer mortality.

In this study, benign lesions are common than malignant lesions. Off the benign lesions, fibroadenoma is the commonest one especially in younger patients. The youngest patient in this study was 17years who was diagnosed as fibroadenoma.

All the malignant lesions in this study are of the invasive ductal carcinoma of varying grades from their histopathological biopsy. This shows the rarity of the other types of malignant lesions of the breast. The most eldest patient in this study group was 68 years and was diagnosed as invasive ductal carcinoma.

There was no geographical significance in the occurrence of either benign or malignant breast lesions.

The lesions which on clinical examination were in favour of malignant lesions, proved to be Phylloides tumor in FNAC/ HPE . This study proves the 100% diagnostic accuracy of the triple assessment test.

This study clearly has a very favorable effect in improving the outcome of women with breast cancer. Thus this study indeed makes progress in the treatment of breast diseases and future progress will depend on the thoughtful planning of new clinical trials and patient participation in those trails.

Screening produces a transient increase in the new cases which can be diagnosed earlier. Eventhough the use of mammography is high, the breast cancer rates continue to raise. Risk factors such as changes in the

age of child bearing, alterations in the average ages of menopause and menarche, the wide spread use of harmone replacement therapy and genetic factors potentially contributes to the increased incidence.

Continued research into the etiology of breast cancer, both genetic and environmental, is important in understanding the rising incidence and in devising interventional strategies to reduce risk.

Early detection, increased use of mammography and improved adjuvant therapy of early stage breast cancer will definitely reduce the mortality of breast cancer.

Breast cancer is one of the commonest cancers in females in India. If these cancers are detected early, it is one of the most curable cancer. This study will certainly create an awareness among the females. The familiarity with one's own breast is implicated as breast awareness. All females should self examine their breasts at least once a month during taking both, best time being the end of her periods. This will certainly help in the notice of any lumps, irregularity in the skin over the breast or the nipple, etc. Each individual should be aware of the changes that can occur in a breast which are likely to be of a pathological conditions.

The most prominent symbol of breast cancer awareness is a pink ribbon. This ribbon may be worn to honor those individuals who are diagnosed as having breast malignancy.

In patients who are diagnosed as malignancy, the treatment never ends with surgery and or chemotherapy and or radiotherapy. These patient should be advised for a regular follow-up. An intensive follow-up comprise of periodic chest X-ray and bone scan for the earlier detection of distant metastasis. In the past few years there has been a strong demand of many screening programs for breast in India. These programs have certainly created an awareness among the educated middle and upper class females.

The emotional impact of cancer diagnosis, symptoms, treatment and related issues can be severe. The cancer support groups provide a supportive and a peaceful environment for the patients of breast cancer. Since breast cancer is common in the older individuals, this geriatric issue warrants further research awareness of the individuals and cancer support services for these patients

The mortality from breast cancer reduces by 33% by routine use of screening mammography in women of more than 50years of age. This reduction comes without substantial risks and at an acceptable economic cost. The screening mammography in women less than 50years of age is however more controversial because of breast density is greater and screening mammography is less likely to detect early breast cancer; screening mammography results in more false positive test findings, resulting in unnecessary biopsies; and younger females are less likely to have breast malignancy, so fewer young females will be benefited by screening.

However, on a population basis the benefits of screening mammography in younger women still appear to outweigh the risks.

Breast cancer mortality trend has changed after the introduction of screening. Studies show that there is definitely better outcome in women of breast cancer who had a prior screening than those who did not have. Mammographic screening causes a significant shift in tumour size distribution from predominantly large to predominantly small.

The death rate from breast cancer can be reduced by decreasing the rate of advanced cancers. The incidence of advanced cancers thus seems as the most predictive measure of success or failure of a screening program. High quality mammography screening detects tumours of even 5mm size. Hence high quality mammography plays a vital role in diagnosing impalpable lesions that are still localized to the breast.

Ultrasound of the breast also plays a vital role in the diagnostic evaluation of benign and malignant breast conditions, other than for its screening purpose in young females.

Although genetic alterations may directly affect only a small percentage of women with breast cancer, the advent of molecular profiling for breast cancer may in the future allow us to identify women at risk before breast cancer develops and permit targeted interventions.

Women should be encouraged to continue regular screening and to participate in clinical trials if possible to devise more specific and effective preventive strategies to benefit most women.

CONCLUSION

- In this study of 100 females of symptomatic breast lesions, 74% are of Benign diseases and 26% are of Malignant lesions.

- The benign lesions are common in the young individuals and fibroadenoma is the commonest benign lesion in this study group.

- The incidence of malignant lesions are common in the elder individuals and most of the lesions are of the invasive ductal carcinoma of different grades.

- The other benign lesions are fibrocystic disease, phylloides tumor, fibroadenosis, keratocyst, breast abscess and fat necrosis.

- Triple assessment consisting of clinical examination, radiological imaging and FNAC/HPE is the best clinical approach to the early diagnosis and management of patients with breast lesions.

- Early screening and diagnosis of breast lesions will reduce the morbidity and mortality due to breast lesions.

From this study it is inferred that there is an increase in the incidence of the Breast cancer in this region and early diagnosis and treatment is the key to reduce the morbidity and mortality.

BIBLIOGRAPHY

1. Parkin DM, Bray F, Forlay J, Pisani P, Estimates the world cancer burden Globocon 2000.Int J Cancer 2001;94;153-154.
2. Bhalla and Chatterjee N. Value of clinicopathological factors in prognosis of breast cancer patients.Indian J Pathol 1983;791:243-245.
3. Kumar R. A clinicopathologic study of breast lumps in Bhairahwa, Nepal.asian Pac J Cancer Prev.2010;Vol 11(4):855-8.
4. Sangma MB, Panda K, Dasiah S. A clinicopathological study on benign breast diseases. J Clin Diag Res.2013 Mar;Vol 7(3):503-6
5. Indo – European hexicon: Pokorny Master PIE Etyma Utexas.edu.Retrieved on 2011-14-22.
6. Schwartz's Principles of Surgery.The Breast F. Charles Brunicardi.Ninth Edition.The McGraw-Hill Companies, Inc.2010.p.424-35.
7. Wood WC (1994)Progress from clinical trials on breast cancer.Cancer 74:2606-26-9.

8. Robbins GF(1984) Cliochirurga;the breast. Silvergirl,Austin,Tex.
9. GRAY'S Anatomy. Chest wall and breast, The Anatomical Basis of Clinical Practise.Susan. Standring.Fortieth Edition.p.929-33.
10. Last's Anatomy. Regional and applied Breast.Chummy S.Sinnatamby.12th Edition.Churchill Livingstone Elseiver, 2011.p.56-8.
11. Bailey and Love's short Practise of Surgery.The Breast Norman S, Williams,Christopher J.K. Bulstrode,P.Ronan O Connell. 25th editin.Edward Arnold Publishers, 2008.p.828-46.
12. Orell and sternetts.Fine Needle Aspiration Cytology.5th Edition. Chapter 7p.163-6.
13. Kaur N, Agarwal N, Panwar P, Mishra K. Clinicopathologic profile of benign breast conditions in Indian Women:prospective study based on aberration of normal development and involution classification.World J Surg.2012 Sep;Vol 36(9);2252-8.
14. Zimmermann N.Ohlinger R.Diagnostic Value of palpation, mammography and ultrasonography in the diagnosis of fibroadenoma.Ultraschall Med.2012 dec; Vol.33 (7):Issue e151-7.
15. I.Jatoi.M. Kamfmann J.Y.Petit.Atlas of Breat Surgery, Chapter1 pg.2.

16. Tiwari M;Role of Fine Needle Aspiration Cytology in diagnosis of breast lumps.Kathmandu University Medical Journal 2007;Vol 5(2):Issue 18,215-7.
17. Gupta RK,Hutchinson AG,Dowlow CS et al:Fine needle aspiration in cytodiagnosis of breast masses in pregnant and lactating women and its impact on management. Diagnosis. Cytopathol. 1993,Vol.9.156-59
18. Ghimire B,Khan MI,Bibhusal T,Singh Y,Sayami P.Accuracy of triple test score in the diagnosis of palpable breast lump.JNMA J Nepal Med Assoc.2008 Oct-Dec;Vol.47(172):189-92.

PROFORMA

Name :

Age :

OP No. :

Address :

Occupation : Income :

Chief Complaints :

1. Pain
2. Lump
3. Heaviness of Breast

History of Present Illness :

1. Lump
2. Pain
3. Discharge from Nipple
4. Retraction of Nipple
5. Loss of Weight

Past History :

1. Recurrence of Abscess
2. Carcinoma of other breast
3. H/O DM/ HT/ IHD/ Drugs/ COPD

Personal History :

1. Marital Status
2. Age of menarche or menopause
3. Menstrual history
4. Lactational history
5. Diet
6. Smoking
7. Alcohol consumption

Family History :

H/O breast diseases in family members

Local Examination :

INSPECTION :

1. Breasts
2. Nipple
3. Areola
4. Arm and Thorax
5. Axilla and Supraclavicular fossa

PALPATION :

In presence of lump

1. Local examination
2. Situation
3. Number
4. Size & Shape
5. Surface
6. Margin
7. Consistency
8. Fluctuation
9. Fixity to skin, breast tissue, underlying muscles, chest wall

EXAMINATION OF LYMPH NODES

A. Palpation of Axillary group of Lymph nodes

1. Pectoral group
2. Brachial group
3. Subscapular group
4. Central group
5. Apical group

B. Palpation of cervical Lymph nodes

GENERAL EXAMINATION:

1. Lungs
2. Bones
3. Liver
4. Rectum and Vagina

INVESTIGATIONS :

1. Blood examination
2. Radiology
   - Ultrasonogram of breast
   - Mammography
3. Pathology
   - FNAC
   - Core Needle Biopsy

DIAGNOSIS :

A. Clinical B. Radiological C. Pathological

FINAL DIAGNOSIS :

TREATMENT :

FOLLOW-UP :

MASTER CHART

No.	Name	age	OP No.	Address	SES	Complaints	Duration	CL. Finding	USG /Mamo	Fnac / cytology	Diagnosis
1.	Vijayalakshmi	48	473839	Sullur	Low	Pain RB	6 months	1x1cm cystic mass	BIRADS II	Keratocyst	Keratocyst –RB
2.	Saradha	43	459574	Allandurai	Low	Lump RB	2 years	3x2cm cystic mass	BIRADS II	Fibrocystic dis	Fibrocystic lesion RB
3.	Selvi	41	118041	Sundapala	Low	Lump LB	3 months	4x3cm hard mass	BIRADS V	Inva .Duc .Ca	Inva.Duc.Ca LB
4.	Rangammal	68	605008	Narasepu ram	Low	Lump LB	1 year	5x3cm hard mass 2x2cm ant.axi.LN	BIRADS V	Ductal.Ca	Inva.Duc.Ca LB
5.	Padmavathy	30	123341	Kuniyamuthr	Low	Lump RB	2 months	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
6.	Kavitha	37	651813	Sungam	Low	Pain RB	15 days	2x1cm cystic mass	BIRADS II	Fibrocystic dis	Fibrocystic dis RB
7.	Kuppulakshmi	59	95442	Perur	Low	Pain LB	8 months	3x2cm hard mass	BIRADS V	Ductal Ca	Ductal Ca LB
8.	Rejina	30	239363	Kamraj nagar	Low	Lump LB	2 yrs	4x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
9.	Kavitha	46	350113	Kongu Nagar	Low	LuminessRB	2months	4x3cm diffu mass	BIRADS II	Fibroadenosis	Fibroadenosis RB
10.	Shakunthala	46	265013	Sam.puram	Low	Lump RB	3years	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
11	Malathy	39	252371	Tiruvall st.	Low	Lump LB	1 Year	4x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
12.	Sabeerabanu	25	474422	Pacapalyam	Low	Pain LB	6 months	2x2cm cystic mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis LB
13.	Angathal	65	395962	Koun.payam	Low	Lump RB	6 years	5x4cm hard mass	BIRADS V	Ductal.Ca	Inva.Duct.Ca RB
14.	Lakshmi	51	6051123	S.S.kulam	Low	Lump LB	5months	3x3cm hard mass	BIRADS IV	Ductal. Ca	Inva.Duct. Ca LB
15.	Vennila	38	557273	Kurumathur	Low	Lump RB	15 days	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
16.	Lakshmi	40	541547	Nalvarnagar	Low	Pain LB	1month	3x2cm cystic mass	BIRADS II	Fibrocystic .dis.	Fibrocystic dis LB
17.	Sundarambal	49	575132	Masallayout	Low	Pain RB	3months	2x2 firm mass	BIRADS II	Fibrocystic .dis	Fibrocystic dis.RB
18.	Vijayarani	44	576925	Thudiyalur	Low	Pain LB	2months	2x2cm cystic mass	BIRADS II	Keratocyst	Keratocyst LB
19	Punitha	37	665614	Kangainur	Low	Lump LB	15 days	3x2cms diff.mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
20.	Lakshmi	57	575201	S.S.nagar	Low	Lump RB	6months	4x3cm hardmass 2x2cm ant.axi.LN	BIRADS IV	Ductal Ca.	Inva.Duct Ca RB
21.	Revathy	17	218826	Singanallur	Low	Lump LB	1month	3x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
22.	Periyanayagi	55	473217	Podanur	Low	Lump LB	1year	3x2cm hard mass	BIRADS IV	Ductal Ca	Inva. Duct Ca LB
23.	Karpagam	32	279672	Ondipudur	Low	HeavinessLB	5months	2x2cm firm mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis.LB
24.`	Gomathy	20	491719	Velanthavalm	Low	Lump RB	15days	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
25	Sarasu	33	547359	Viiankuruchi	Low	Pain LB	1month	3x2cm hard mass	BIRADS IV	Ductal Ca.	Inva.Ductal Ca LB

No.	Name	age	OP No.	Address	SES	Complaints	Duration	CL. Finding	USG /Mamo	Fnac / cytology	Diagnosis
26	Kunjammal	36	542693	Perur	Low	HeavinessLB	6months	4x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
27.	Mythili	19	487453	Kuruchi	Low	Lump RB	10days	2x1cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
28	Buvaneshvari	20	302690	Allandurai	Low	Lump LB	15days	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
29	Priya	23	574818	Sitra	Low	Pain RB	6months	3x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
30.	Rajeshwari	22	574573	Verakeralam	Low	Pain RB	7days	1x1cm cystic mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis.RB
31	Jayapriya	24	576572	Madukarai	Low	HeavinessLB	15days	Diffuse firm mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis.LB
32	Sandhiya	23	63760	Katuchetilane	Low	HeavinessRB	2months	3x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
33	Latha	30	61937	Swamipuram	Low	Pain LB	20days	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
34	Noorjahan	56	229596	Gurunath st.	Low	Lump LB	2years	4x3cm hard mass 2x2cm ant.axi.LN	BIRADS IV	Ductal Ca.	Inva.Ductal Ca.LB
35	Selvi	27	14987	Selvapuram	Low	Pain RB	15days	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
36	Pushpavalli	56	62790	Ondipudur	Low	Pain RB	2years	3x2cm hard mass	BIRADS IV	Ductal Ca.	Inva.Ductal Ca.RB
37	Lalitha	47	8064	Ediyarpalayam	Low	Pain LB	15days	2x2cm cystic mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis.LB
38	Jothy	32	1509	Va .puram	Low	Lump LB	10days	3x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
39	Arokya rani	17	11229	S.S.kulam	Low	Lump RB	7days	2x1cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
40	Rangal	37	8172	Ondipudur	Low	HeavinessRB	1month	5x3cm diff.mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis.RB
41	Rani	48	84997	Madukarai	Low	Lump LB	20days	2x1cm hard mass	BIRADS III	Ductal Ca.	Inva.Ductal Ca. LB
42	Saraswathy	50	212415	Vadavalli	Low	HeavinessRB	1year	3x3cm cystic mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis.RB
43	Sumathy	27	18224	Perur	Low	Lump LB	7days	1x1cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
44	Vijayalaxmi	38	26381	V.palayam	Low	Lump RB	10days	1x1cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
45	Jerina	45	185571	Irrugur	Low	Lump LB	1year	2x2cm hard mass 1x1cm ant.axi.LN	BIRADS IV	Ductal Ca.	Inva.Ductal Ca. LB
46	Deivanai	47	21278	Allandurai	Low	Lump RB	3years	3x3cm hard mass 2x2cm cen.axi.LN	BIRADS IV	Ductal Ca	Inva.Ductal Ca.RB
47	Nagarathinam	50	16644	Vedapatti	Low	Lump LB	1year	4x3cm hard mass	BIRADS IV	Ductal Ca	Inva.Ductal Ca.LB
48	Jothilakshmi	36	3964	Sungam	Low	Lump RB	3months	2x2cm hard mass	BIRADS IV	Ductal Ca.	Inva. Ductal Ca.RB
49	Bannari	40	8109	Veerakerlam	Low	Lump RB	1year	8x6cm firm mass	BIRADS III	Phylloides tr.	Phylloides tumor RB
50	Kulanthaiamal	42	21654	Veerakerlam	Low	Pain RB	15 days	3x2cm hard mass	BIRADS IV	Ductal Ca	Invasive Ductal Ca RB

No.	Name	age	OP No.	Address	SES	Complaints	Duration	CL. Finding	USG /Mamo	Fnac / cytology	Diagnosis
51	Pongodi	18	208401	Sulur	Low	Pain RB	7 days	1x1cm firm mass	BIRADS II	fIbroadenoma	Fibroadenoma RB
52	Selvi	22	219541	Avarampalym	Low	Pain RB	3days	3x3cm cystic mass	BIRADS II	Abscess	Abscess RB
53	Gomathy	18	33381	Sowripalyam	Low	Lump RB	7days	3x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
54	Sharadha	56	25359	Goundthotam	Low	Lump LB	6months	3x3cm hard mass 2x2cm ant.axi.LN	BIRADS V	Ductal Ca	Inva.Ductal Ca.LB
55	Mani	56	26309	Verakerlam	Low	Lump RB	6 months	6x5cm hard mass	BIRADS III	Phylloides tr.	Phylloides tr.RB
56	Rukumani	66	272278	Edayarpalyam	Low	Lump LB	3 months	5x3cm hard mass 1x1cm ant.axi.LN	BIRADS IV	Ductal Ca	Inva.Ductal Ca LB
57	Poongodi	18	30279	Nanju.puram	Low	Pain RB	7 days	6x5cm diff.mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
58	Selvi	19	46559	Sungam	Low	Pain LB	10 days	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
59	Padmavathy	48	21456	Erugur	Low	HeavinessLB	1 month	5x3cm diff.mass	BIRADS II	Fibroadenosis	Fibroadenosis LB
60	Nagalakshmi	50	60136	Karamadai	Low	Pain LB	15 days	2x2cm cystic mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis. LB
61	Poongodi	49	58522	Kuruchi pirvu	Low	Lump RB	2 months	6x5cm hard mass	BIRADS III	Phylloides tr.	Phylloides tr. RB
62	Sundarambal	56	51115	Karadimadai	Low	Pain LB	3 months	8x6cm hard mass	BIRADS III	Phylloides tr.	Phylloides tr. LB
63	Palaniyammal	41	71644	Kovilpalyam	Low	Lump LB	10days	4x3cm hard mass	BIRADS IV	Ductal Ca	Inva.Ductal Ca LB
64	Kalyani	37	71598	Kondanur	Low	Lump LB	1 month	10x8cm firm mass	BIRADS III	Phylloides tr.	Phylloides tr. LB
65	Palaniyammal	41	54782	Singanallur	Low	Pain LB	15 days	2x1cm cystic mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis. LB
66	Sivagami	45	64381	RN puram	Low	Pain LB	7 days	3x2cm firm mass	BIRADS II	Fat necrosis	Fat necrosis LB
67	Krishnaveni	45	557011	Kongunagar	Low	Pain RB	15 days	6x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
68	Devi	30	56752	Karamadai	Low	Lump RB	20 days	4x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
69	Saraswathy	52	343016	Karadimadai	Low	Lump RB	2 months	6x4cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
70	Kanagathal	47	318603	Patchapalyam	Low	Pain RB	7 days	3x3cm diff.mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis. RB
71	Munni	45	31256	Annur	Low	Pain LB	2 months	3x3cm diff.mass	BIRADS II	Fibroadenosis	Fibroadenosis LB
72	Latha	50	213542	Selvapuram	Low	Lump RB	6 months	5x4cm hard mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
73	Saroja	65	213323	Kuruchipirivu	Low	Pain RB	10 days	4x2cm cystic mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis. RB
74	Pushparani	31	812732	Pn palyam	Low	Lump RB	15 days	5x4cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
75	Kanchana	45	379423	Irugur	Low	Lump LB	1 month	4x3cm hard mass	BIRADS IV	Ductal Ca.	Inva.Ductal ca. LB

No.	Name	age	OP No.	Address	SES	Complaints	Duration	CL. Finding	USG /Mamo	Fnac / cytology	Diagnosis
76	Rajam	61	516232	Vanniur St	Low	Lump LB	5 months	3x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
77	Veda	23	551261	Sidapudur	Low	Pain LB	5 months	4x3cm diff.mass	BIRADS II	Fibroadenosis	Fibroadenosis LB
78	Selvi	41	1251106	Papampatty	Low	Lump RB	6 months	3x2cm hard mass	BIRADS IV	Ductal Ca	Inva.Ductal Ca RB.
79	Kuppulakshmi	59	1412761	Periyar nagar	Low	Lump LB	2 years	5x3cm hard mass	BIRADS IV	Ductal Ca.	Inva. Ductal Ca. LB
80	Mallika	34	516234	P N palyam	Low	Lump LB	15 days	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
81	Myilamal	45	475143	Vysial St.	Low	Lump RB	20days	5x4cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
82	Jothilakshmi	38	516149	Annur	Low	Lump RB	1 month	6x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
83	Lakshmi	51	371654	Seiranpalyam	Low	Lump RB	3 months	3x2cm hard mass	BIRADS IV	Ductal Ca.	Inva. Ductal Ca. RB
84	Padmavathy	30	48317	Pachapalyam	Low	Pain LB	7 days	5x3cm cystic mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
85	Buvaneswari	26	160313	S.S. Kulam	Low	Pain LB	3 days	2x1cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
86	Dhanya	21	179813	Thondamutur	Low	Lump RB	10 days	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
87	Sakuntala	46	141013	Arasur	Low	Pain RB	3 months	5x4cm diff. mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis. RB
88	Shanthi	35	280852	Puliyampati	Low	Pain RB	5 days	4x3cm cystic mass	BIRADS II	Abscess	Abscess RB
89	Kanagathal	47	3117513	Kinatukadavu	Low	Lump RB	1 month	5x3cm diff. mass	BIRADS II	Fibrocystic dis.	Fibrocystic dis.RB
90	Puspavalli	56	1093012	Annur	Low	Lump RB	6 months	5x4cm hard mass	BIRADS IV	Ductal Ca.	Inva. Ductal. Ca. RB
91	Vijayalaxmi	48	473889	Siva colony	Low	Lump RB	15 days	1x1cm cystic mass	BIRADS II	Keratocyst	Keratocyst RB
92	Angathal	65	39596	S.S.Kulam	Low	Lump RB	2 years	6x5cm hard mass 2x2cm ant.axi.LN	BIRADS IV	Ductal Ca.	Inva. Ductal Ca. RB
93	Periyanagi	55	43799	Nalvarnagar	Low	Lump LB	6 months	4x3cm hard mass	BIRADS IV	Ductal Ca.	Inva. Ductal Ca. LB
94	Sharada	43	42164	Kurumathur	Low	Lump RB	15 days	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
95	Vijaya	47	50468	Appanpalyam	Low	Lump RB	2 months	5x4cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
96	Vannilla	43	49923	Vellalur	Low	Lump RB	3 months	8x5cm firm mass	BIRADS III	Phylloides tr.	Phylloides tr. RB
97	Kunjammal	36	48337	B.K.pudur	Low	Pain LB	10 days	3x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma LB
98	Saraswathy	52	36087	Madukkarai	Low	Lump RB	15 days	4x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
99	Gowri	40	557268	Edayarpalyam	Low	Lump RB	7 days	2x2cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB
100	Kamithabevi	19	558485	Ukkadam	Low	Lump RB	7days	3x3cm firm mass	BIRADS II	Fibroadenoma	Fibroadenoma RB

SES - Socio Economic Status ; **USG** - Ultra Sound ; **Mamo** - Mammography ; **BIRADS** - Breast Imaging Reporting and Data System ; **I**nva. **D**uc. **C**a - Invasive Ductal Carcinoma ; **LB** - Left Breast ; **RB** - Right Breast ; **Dis** - Disease ; **tr** - Tumor