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Department of surgical diseases No. 2

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DISEASES OF BREAST

Textbook for students of 4 courses medical faculty of faculty surgery

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Diseases of breast: teaching guide for students, studying at “General Medicine” faculty. - North Ossetian state medical academy. - Vladikavkaz, 2020. - 20 sh.

This teaching guide covers main issues about etiology, pathogenesis, clinical features, laboratory and instrumental diagnostics and complications of Diseases of breast.

Teaching guide “Diseases of breast” is made for “Faculty surgery” discipline in accordance with requirements of FSES HE, and is intended for students from medical universities and faculties, studying for specialty 31.05.01 General medicine.

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CONTENTS

SURGICAL ANATOMY OF BREAST

• Breast, a modified sweat gland occupies the pectoral region from the 2nd to the 6th rib vertically, and from the lateral border of sternum to the midaxillary line, horizontally. It is hemispherical, and lies in the superficial fascial planes.
• It is composed of fatty tissue and does the function of secreting milk.
The axillary tail of Spence is the part of the breast which is in the axilla and is deeper to the deep fascia, whereas the entire breast is a subcutaneous structure.

Structure of the breast (Fig. 1)
1. Nipple and areola complex: The nipple is located in the 4th intercostal space, in the midclavicular line. It is the erectile structure of the breast, and is directed forwards and laterally for the convenience of feeding the child. Areola has modified sweat glands and sebaceous glands. These enlarge during pregnancy and are called glands of Montgomery. Both nipple and areola are pigmented due to melanin deposition which increases during pregnancy. Hair is absent in the areola of women (present in males).
2. Parenchyma of breast.
3. Stroma gives support to the glandular structure. Therein lie ligaments of Cooper which are cone-shaped fibrous bands. Their apex is attached to overlying skin, and base to the fascia over pectoral is major. Puckering of the skin is due to infiltration of the ligaments of Cooper.
4. Lobule is the chief functional and structural unit of breast. Many lobules join to form a lobe. There are 15-20 lobes and each lobe is drained by a lactiferous duct. They are 15-20 in number arranged radially, lined by myoepithelial cells, which converge into the nipple. Diameter of a lactiferous duct is 2-4 mm.

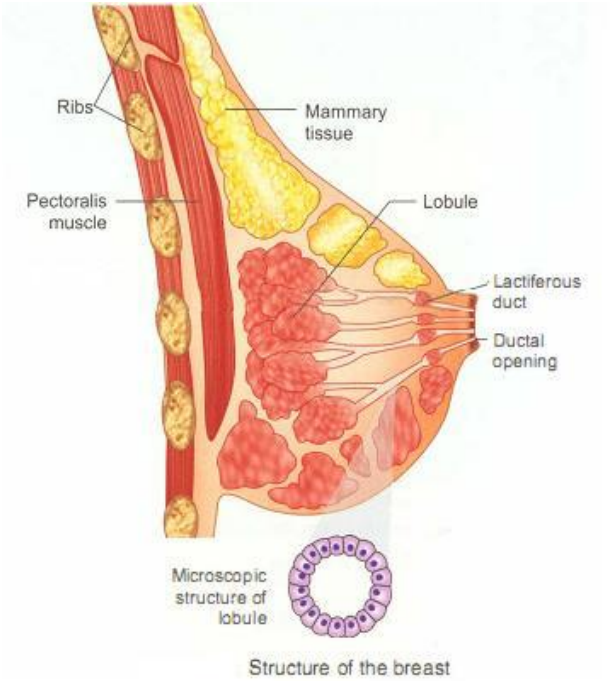


Fig. 1

Lymphatic drainage

They can be divided into lymph nodes and lymphatics (Fig. 2).

I. Lymph nodes

1. Anterior or pectoral: They are under the pectoralis major which forms anterior fold of axilla

2. Central group: These lymph nodes are present in the centre of axilla (arm pit). One has to dip the examining fingers slightly deeper into axilla to detect the enlargement.

• Anterior and central group of nodes are commonly involved in carcinoma breast.

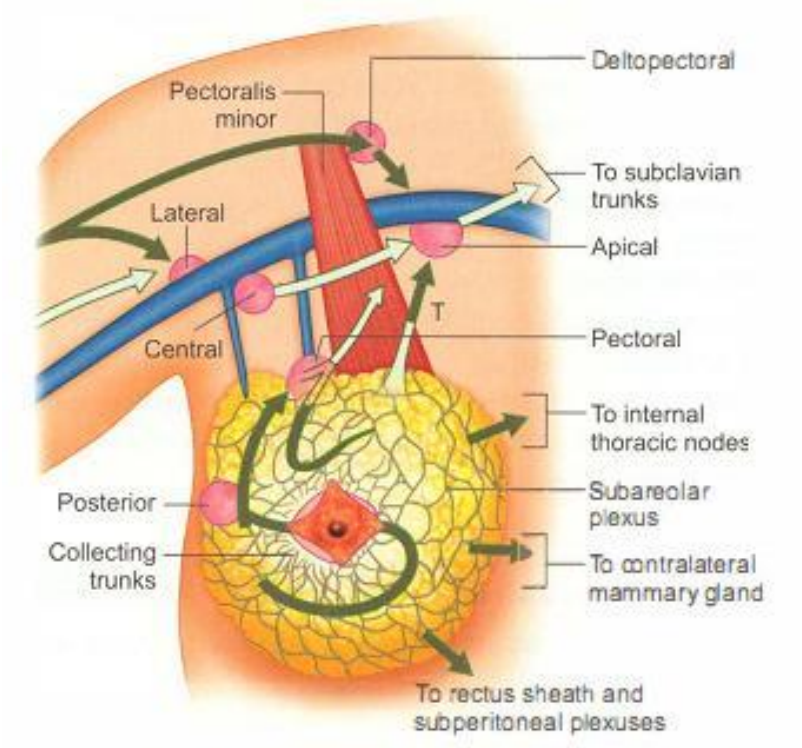
3. Lateral group are elt against humerus. They are also called brachial group.

4. Apical: They are also called infraclavicular nodes, situated very high in the axilla. They are difficult to feel clinically.

5. Posterior: They are also called subscapular group of lymph nodes. They are felt along the posterior fold of the axilla. These five groups together form the axillary group of lymph nodes.

6. Internal mammary lymph nodes: Also called parasternal nodes. They lie along internal mammary vessels. They are located in the 2nd, 3rd and 4th space.

7. Supraclavicular lymph nodes: Spread to supraclavicular lymph nodes indicate advanced stage of the disease. It indicates poor prognosis.



Lymph nodes and lymphatic spread from breast

Fig. 2

II. Lymphatic Vessels

1. Superficial lymphatics: Drain skin over the breast except nipple and areola. Superficial lymphatics of one breast communicate with the contralateral breast across midline.
2. Deep lymphatics: Drain parenchyma of the breast. They also drain nipple and areola.

Important key points about lymphatics and spread

- The first lymph nodes draining the tumour bearing area is called sentinel node.
- 75% of the lymph from the breast drains into axillary nodes.
- 20% drains into the internal mammary nodes
- 5% of lymph drains into posterior intercostal lymph nodes.
- Most of the lymphatics eventually drains into central to apical and then to supraclavicular lymph nodes.
- Internal mammary nodes receive lymphatics not only from inner quadrant but also from outer quadrant.
- Lymphatics from inner quadrant of the breast penetrate rectus sheath and thus spread into coelomic cavity. It results in ascites, rectovesical deposits and Krukenberg tumours.
- Krukenberg tumours are bilateral bulky ovarian metastasis in premenopausal women. During ovulation, raw surface develops over the ovary into which malignant cells drop and develop into large tumours (transcoelomic spread).

Blood supply of the breast (branches of axillary artery)

1. Lateral thoracic artery gives many branches which penetrate through the pectoralis major and supply the breast.
2. Internal mammary artery gives branches which perforate intercostal spaces.
3. Pectoral branches of thoraco-acromial artery supply upper part of the breast.
4. Lateral branches of posterior intercostal arteries

Veins: Breast is drained by perforating branches of internal mammary veins, tributaries of axillary veins and perforating branches of posterior intercostal veins.

Venous return follows the arteries but drain into large veins that also receive blood from vertebrae and thoracic cage. E.g. posterior intercostal veins joining paravertebral plexus of veins (Batson 's venous plexus). This explains the occurrence of metastasis in the vertebrae and pelvic bones from carcinoma of the breast.

CYSTIC SWELLINGS OF BREAST

Classification

1. Inflammatory: Acute bacterial mastitis with abscess
2. Neoplastic:
   a. Benign: Phyllodes tumour
   b. Malignant: Intracystic carcinoma
3. Non-neoplastic cyst
   a. Fibroadenosis-cyclical mastalgia
   b. Simple cysts of the breast
   c. Cyst of Bloodgood-blue domed cyst
4. Retention cyst of the breast: Galactocoele
5. Other rare causes of cysts of the breast
   a. Tuberculous mastitis with cold abscess
   b. Lymphatic cyst of the breast (congenital)
   c. Hydatid cyst of the breast
   d. Haematoma of the breast

ACUTE BACTERIAL MASTITIS
(BREAST ABSCESS- PYOGENIC MASTITIS)

Aetiopathogenesis

1. Lactational mastitis

It is most commonly encountered during lactation. Hence, it is called lactational mastitis.

Precipitating factors

• Crack/fissure in the nipple
• Retracted nipple. Hence, cleaning of the breast is a problem
• Oral cavity infection in the child

2. Haematoma

• Infection in a haematoma can result in an abscess-rare cause.
• Staphylococcus produces many enzymes/toxins such as catalase, coagulase, hyaluronidase which result in an abscess. It also inhibits phagocytosis because of type 'A' protein on its surface. Staphylococcus aureus, which enters through the nipple, proliferates intraductally and produces clotting of the milk. Within the clot the organisms multiply, which results in a cellulitic stage of the breast (mastitis) and in untreated cases, it may give rise to a breast abscess. Initially, only one lobule and duct get affected. Later other lobules get infected, giving rise to an intramammary abscess.

3. Nonlactational breast abscess

• It occurs in patients with duct ectasia and periductal mastitis. When such an abscess ruptures, it results in a mammary duct fistula. It classically drains at the junction between the areola and breast skin. Anaerobic bacteria are the cause in majority of cases.

4. Other factors: Diabetes, AIDS and chronic illness also can give rise to breast abscess.

MRSA AND BREAST ABSCESS

- Methicillin resistant *Staphylococcus aureus* (MRSA) or community acquired MRSA or CA-MRSA can cause breast abscess in patients who have no traditional risk factors
- Hospitals, nursing homes (patients with open wounds) are the risk areas
- Co-amoxyclav 1000 mg 2 times/day—7–10 days
- Erythromycin 500 mg 3 times/day—7–10 days
- Vancomycin 1.5 g vial 12th hourly x 7–10 days
- Suspect MRSA infection when abscesses recur, abscess persists and is nonlactational.

BREAST ABSCESS

- Common organism—*Staphylococcus aureus*
- Retracted nipple is one of the causes
- Commonly seen during **lactational period**
- Very painful condition
- Do not wait for fluctuation
- Guided aspiration should be done (Fig. 21.9)
- Ultrasound can be done
- Cloxacillin is the drug of choice
- Nonlactational abscess—Metronidazole is drug of choice

Clinical features

• Severe pain in the breast due to spreading inflammatory exudate. Breast is swollen, tense, tender and warm to touch. These are the signs of cellulitic stage.

• Once breast abscess develops, there is high grade ever with chills and rigors and a soft, cystic fluctuant swelling can be felt in the breast. In untreated cases, abscess may rupture through the skin resulting in necrosis of the skin of the breast, ulceration and discharge (Fig. 3)

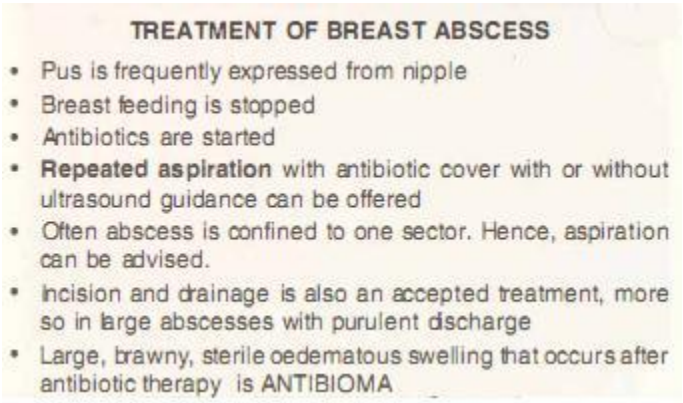
Large breast abscess presented late to the hospital. Managed by incision and drainage (I and D), not aspiration

Extensive necrosis of skin due to severe mastitis (*Courtesy:* Dr C.G. Narasimhan, Surgeon, Mysore, Karnataka)

Fig. 3

• In deep-seated abscess, it is difficult to elicit fluctuation and often fluctuation is a late sign. Hence, if throbbing pain and fever with chills and rigors are present, immediate drainage is mandatory. If not done, significant amount of breast tissue will be destroyed.

Treatment:



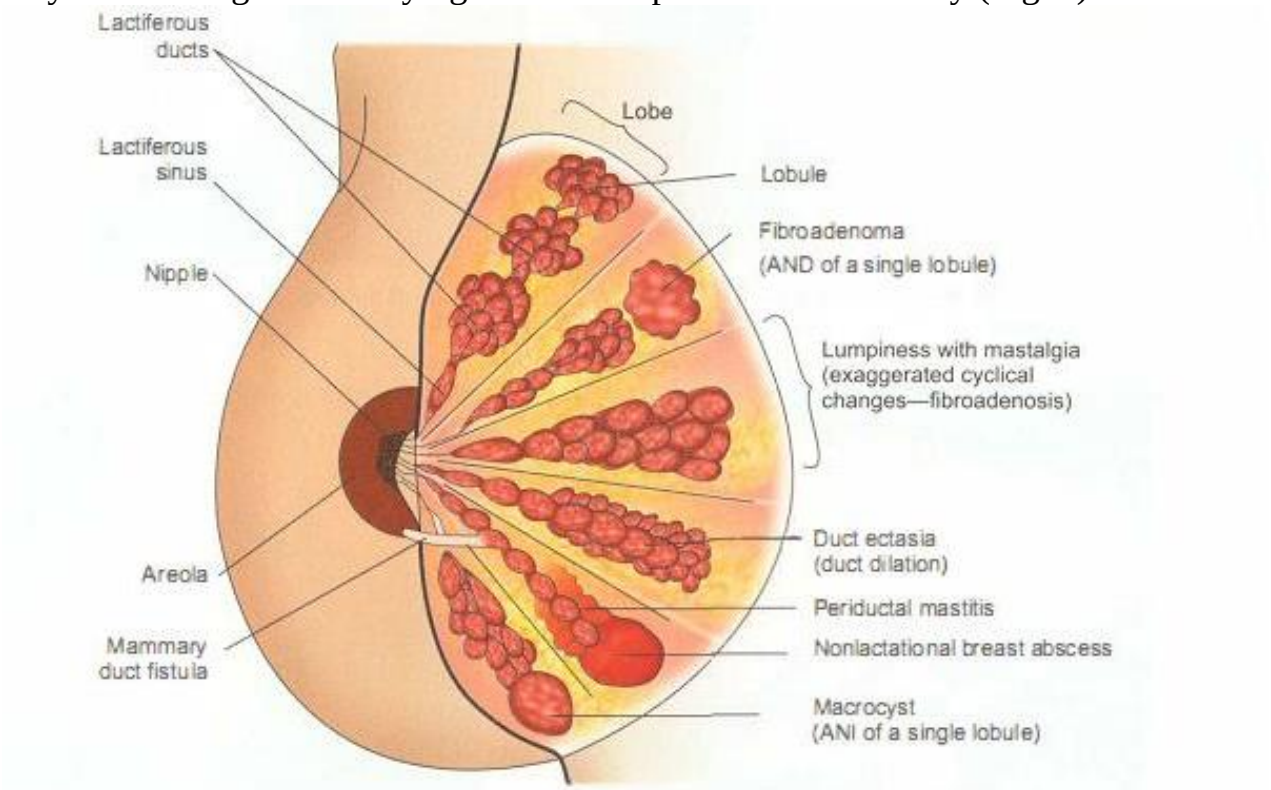
• Stage of cellulitis
• Not to feed the child on the affected side.
• Cloxacillin 500 mg, 6th hourly, orally for 7-10 days.
• Anti-inflammatory drugs such as ibuprofen 400 mg, three times a day.
• Good support to the breast.
• For nonlactational breast abscess, add metronidazole 400 mg, 3 times a day for 5-7 days.

Stage of abscess:
• The abscess should be drained-incision and drainage (I and D) under antibiotic cover.
• If the abscess is situated in any quadrant of breast, other than lower quadrant, it is drained by radial incision.
• Abscess in lower quadrant is drained by inframammary incision placed in the inferior aspect of breast (refer to breast abscess drainage under operative surgery section).
• When both the breasts have an abscess, the breasts should be emptied and the milk that is expressed can be boiled and given to the child.

ABERRATIONS OF NORMAL DEVELOPMENT AND INVOLUTION OF THE BREAST

The concept of Aberrations of Normal Development and Involution (ANDI) of the breast was first published by LE Hughes et al of Cardiff Breast Clinic in 1987. The ANDI classification is based on pathogenesis, and recognises that a spectrum exists rom normal, through mild abnormality, to disease. This has resulted in a radical change in attitude to the understanding and management of

breast disorders. Changes previously regarded as disease are so common that they must be regarded as lying within the spectrum of normality (Fig. 4).



Benign breast disorders and diseases (*Courtesy:* Dr Stanley Mathew, Professor of Surgery, KMC, Manipal)

Fig. 4

This concept is of value in dispelling the supposed association between the benign conditions and cancer. Most patients with lumps and mastalgia are concerned that they may be harbouring cancer (the result of a successful information campaign!!), and once a definite opinion of the benign nature of the lump is conveyed and the patient is informed that no further treatment is required, most would be reassured. Having noted the above, a word of caution is due here-It is preferable to over treat a benign breast disease rather than miss or delay treatment of an early carcinoma of the breast (Fig. 4). So following the clinical dictum "In a patient who is above the age of 40, with a recently detected lump in the breast, it should be considered to be carcinoma breast until proved otherwise" may prove to be a wrong answer in many but the correct management in most. From the above, it follows that, in case of doubt (where there is a high risk patient or doubtful signs of malignancy) it would be prudent on the part of the treating surgeon to rule out malignancy by triple assessment (physical examination, mammography and cytology). If it is not possible to conclusively rule out the possibility of malignancy, then the patient would be best advised a lumpectomy.

The term ANDI should not be confined to imply fibroadenosis (now termed mastalgia with nodularity). ANDI includes several aberrations and disorders (Table 1). The following table includes all the aberrations, disorders and disease entities originally included under the ANDI classiication as proposed by LE Hughes, et al.

Aberration of the Normal Development and Involution (ANDI) of the breast

Stage (Peak age in years)	Normal process	Aberration		Disease state
		Underlying condition	Clinical presentation	
Early reproductive period (15–25 years)	Lobule formation	Fibroadenoma	Discrete lump	Giant fibroadenoma (more than 5 cm).
	Stroma formation Nipple eversion	Juvenile hypertrophy Nipple	Excessive breast development	Multiple fibroadenomas Submammary abscess/ mammary fistula
Mature reproductive period (25-40 years)	Cyclical hormonal effects on glandular tissue and stroma	Exaggerated cyclical effects. Bloody discharge per nipple	Generalised or discrete lump	Cyclical mastalgia and nodularity (incapacitating)
Involution (35–55 years)	Lobular involution (including microcysts, apocrine changes, fibrosis, adenosis)	Macrocysts Sclerosing lesions adenosis	Discrete lumps X-ray abnormalities	Cystic diseases
	Ductal involution (including periductal round cell infiltrates), dilate with scleroma	Duct dilatation	Nipple discharge	Periductal mastitis with bacterial infection and nonlactational breast abscess—leading to mammary duct fistula
		Periductal fibrosis	Nipple retraction	
	Epithelial turnover	Mild epithelial hyperplasia	Histological report	Epithelial hyperplasia with atypia

Table 1

Breast pain

- It is for mastalgia that many women attend breast clinic. It can be classified as given in Table 2.
- If painful nodularity is present or more than one week, it is significant (more than normal discomfort).

Mastalgia

Cyclical	Noncyclical
• Related to monthly cycles • Associated with premenstrual nodularity and breast discomfort • Excessive prolactin release from pituitary gland may be the cause • Young women are affected • Reassurance • Drugs • Excision–last resort	• Less common • Pain can be due to periductal mastitis or costochondritis (Tietz's disease) • Simple measures such as well supported brassieres • Analgesics may be beneficial • Injection with local anaesthetic on a trigger point

Table 2

CYCLICAL MASTALGIA WITH NODULARITY

Also called mammary dysplasia, fibrocystic disease, Schimmelbusch disease, hormonal mastopathy, or fibro-adenosis.
The term ANDI should not be confined to imply fibro-adenosis (now termed mastalgia and nodularity). In fact fibroadenoma is an AND of a lobule and cyst (macrocyst) is an ANI of a lobule.
Definition
It is an aberration of physiological changes that occur in the breast from menarche till menopause. It is an ANDI (aberration in normal development and involution).
• Women around the age of 40 are the usual sufferers.

Pathology:

1. Fibrosis results in increased connective tissue growth. Fat and elastic tissue become less, and chronic inflammatory cells such as plasma cells, can be present.
2. Cyst formation: Fibrosis compresses the ductules, which is responsible for cyst formation. Hence, it is a retention cyst. The cyst contains dark mucoid material and it may discharge serous fluid or green coloured fluid through the nipple. Hence, it is calle dibrocystic disease of the breast. Cyst may be single or multiple confined to one lobe or many lobes. These are microcysts.
3. Adenosis: Proliferation of the acini and gland is an important feature of fibroadenosis.
4. Epitheliosis: Fibroadenosis is not a precancerous condition but if the degree of epitheliosis is more, it can be considered as premalignant condition. Epithelial hyperplasia mainly occurs in the acini.
5. Papillomatosis and apocrine metaplasia of the epithelium lining cystic spaces are the other features.These changes are not considered premalignant.

Clinical features
• Females around the age of 30-40 are the victims-spinsters, married childless women and women who have not suckled their babies are the usual suferers.
• Severe pain in the breast in the premenstrual period and during menstruation. It is called cyclical mastalgia. Upper outer quadrant, bilaterally is affected.
• Clinical examination of the breast reveals a coarse, nodular, tender, lumpiness which is better felt with the finger and the thumb. Often, there

are multiple, irregular, firm, nodularities palpable bilaterally, especially in the upper
outer quadrants. Nipple discharge which is serous or green coloured may occur.

Treatment:
I. Conservative line of management
• Evening primrose oil in adequate doses for 3 to 4 months are beneficial in a few patients. These patients have abnormal fatty acid profiles and decreased levels of metabolites of linolenic acid. Treatment with primrose oil improves essential fatty acids because it is rich in polyunsaturated essential fatty acids (oleic acid and linoleic acid). Costly but still worth trying as first line of treatment, specially useful in women above the age of 40.
• Bromocriptine which decreases the prolactin levels, 1.25 mg, twice a day, may reduce the pain and may be increased to 2.5 mg twice a day. It is useful or cyclical mastalgia.
• Danazol, it is a gonadotrophin releasing hormone inhibitor. 200400 mg/day, thrice a day is given. It acts by reducing FSH and LH levels.
• Tamoxifen 10 mg, twice a day is a better alternative to danazol.
Treatment may have to be continued for some months
(Table 3).

Drug treatment of cyclical mastalgia

Drug	Mechanism of action	Dose	Maintenance dose	Side-effects
1. Evening primrose oil	• Contains essential fatty acids which correct abnormal prostaglandin synthesis. • Natural form of gamolenic acid	• 1000 mg/day 6 capsules • First choice in cyclical mastalgia • 4 months treatment	• Can be reduced to 3 capsules/day • Mild to moderate mastalgia	No side-effects
2. Danazol	Interfere with FSH and LH	• 50 mg/day—increased to 100 mg/day	• 50 mg/day for 3 months • Severe breast pain with nodularity	Amenorrhoea Weight gain Acne, hirsutism
3. Bromocriptine	It lowers prolactin by blocking its release from pituitary	• 2.5 mg/day—slowly increased to 2.5 mg twice/daily	• 2.5 mg/day • Inferior to danazol	Nausea, vomiting, dizziness
4. Tamoxifen	Antioestrogen	• 10 mg/day/3 for months	• Only for 3 months • Start if relapses occur	Minimal when used for short period.
5. Goserelin	Luteinising hormone Releasing hormone analogue	• 98% success in cyclical mastalgia	• Reserved for refractory cases	Reversible postmenopausal symptoms

II. Surgery
Indications for surgery in fibroadenosis:
1. FNAC suggests epitheliosis
2. A very painful lump
3. A hard lump about which the patient is worried and anxious

• Excision of the lump. Surgery for fibroadenomas ends up in removing some breast tissue and the lump. As it has no capsule of its own, it is a messy surgery unlike fibroadenoma surgery (Figs 5).
• Is there a role for subcutaneous mastectomy? In patients with family history of breast carcinoma, if they have lumps in the breast with severe degree of epitheliosis, it may be worthwhile doing subcutaneous mastectomy.

Submammary incision is given to excise a large lump in the breast

Observe the nodularity of the lump

Excised specimen having nodularity and cystic changes

FIBROADENOMA

It is a benign tumour in which the epithelial cells are arranged in a fibrous stroma. It is an AND (Aberration of Normal Development) of a single lobule.

Types

I. Pericanalicular type in which ibrosis is more
2. Intracanalicular type in which fibrosis is less.

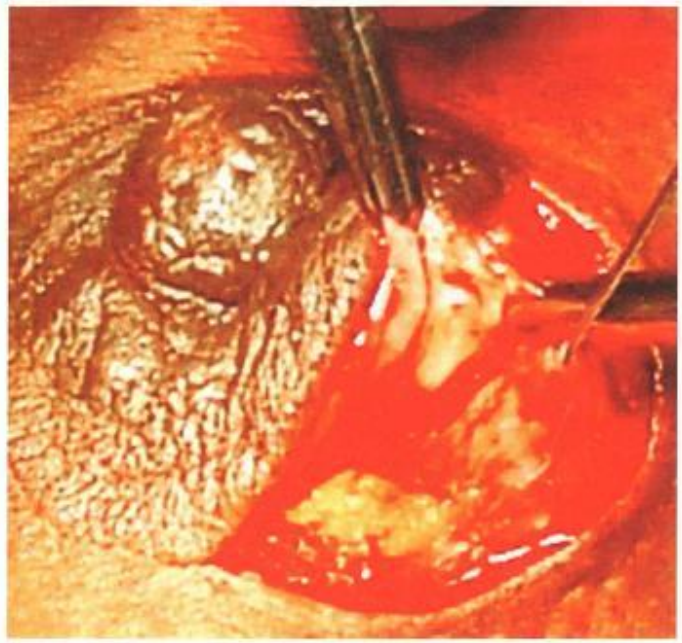
Clinical features

• Peak age of incidence is at 20 years.
• Patients present with painless lump in the breast.
• It is smooth, round bordered, irm to hard in consistency, and freely mobile within the breast.
• Due to its free movement within breast tissue, it is known as breast mouse.
• However, when fibroadenoma occurs in elderly patients, it may not have characteristic features because of fibrosis.

Treatment

• Excision of the lump

I. In intracanalicular type (Fig. 6), the lump is deeper and peripheral. It is removed by submammary incision.

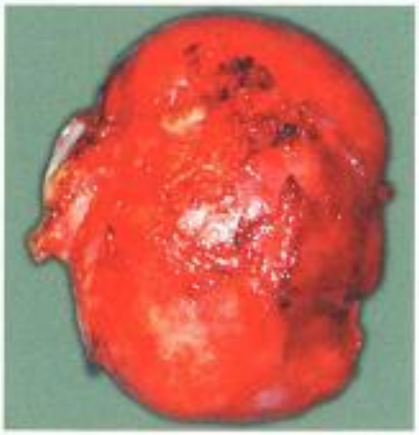


A circumareolar incision is given to excise the lump

Fig. 6

2. In pericanalicular type (Figs 7), the lump is superficial. It is removed by periareolar incision

Fibroadenoma excised—external view



Fibroadenoma—excised specimen

Figs 7

Complications

• Fibroadenoma and malignancy: Patients with simple fibroadenoma and no family history of breast cancer have no risk of cancer. Complex fibroadenomas which show cysts, sclerosing adenosis, calcification have increased risk (3 to 4 times) of cancer.

Fibroadenoma and fibroadenosis are compared in Table 4.

Differences between fibroadenoma and fibroadenosis

	Fibroadenoma	Fibroadenosis
• Incidence	Less common	More common
• Nature	Benign tumour of one lobule	Aberration of normal changes in the breast
• Pain in the breast	Not a feature	Very common, premenstrual
• Location	Unilateral	Usually bilateral
• Lump	Well-defined, firm, mobile	Irregular, ill-defined, tender lump
• Capsule	Well-defined	No capsule
• Discharge	No	Serous or green coloured
• Malignancy	Rarely–sarcoma	Carcinoma (if epitheliosis is present)
• Treatment	Excision	Excision or drugs

Table 4

DUCT ECTASIA / PERIDUCTAL MASTITIS
PLASMA CELL MASTITIS

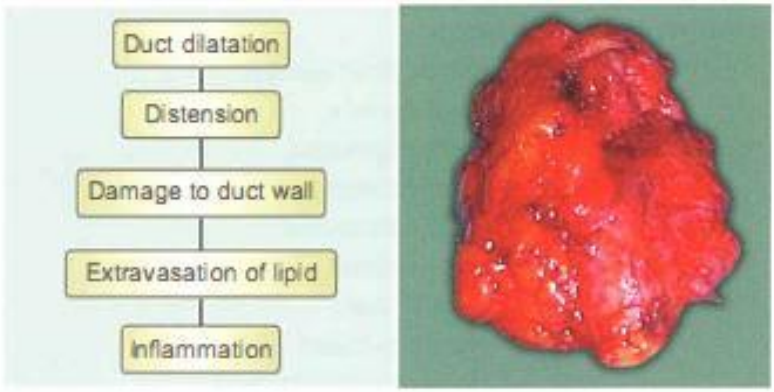
• Common in middle aged women.
• There is primary dilatation in one of the lactiferous ducts.

Aetiology

• Actual cause is not known. Mild low-grade infection (anaerobic bacteria) has been considered as one of the actors.
• Increased in smokers: Smoking increases the virulence of commensal bacteria.

Pathology

• There is dilatation of one of the lactiferous ducts.
• Due to dilatation, the contents tend to undergo stasis. The epithelial debris, and serous fluid collectively fonn a thick paste-like material rich in lipid.
• It may cause discharge per nipple
• There is intense periductal inflammation with lympho-cytes and plasma cells (Fig. 8). Hence, it is called plasma cell mastitis.
• Fibrosis causes nipple retraction



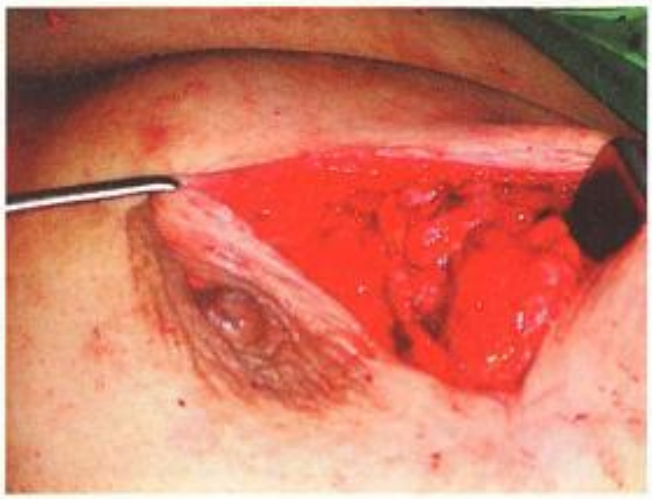
Excised specimen. Observe the fibrosis due to periductal inflammation

Fig. 8

SUMMARY OF THE TREATMENT OF PERIDUCTAL MASTITIS

Periductal infiltration of plasma cells, lymphocytes
Excision of all major ducts (Hadfield's operation)
Retraction of nipple (partial)
Infection by anaerobes/irritation by smoking
Dilatation of breast /ducts
Untreated—Abscess/fistula/lump
Creamy/paste-like discharge
Treated by co-amoxiclav and metronidazole
Remember as **PERIDUCT**

Clinical features
• Middle-aged woman
• Paste-like material discharge per nipple
• After some time, because of fibrosis, a lump can be felt, which can be confused for carcinoma of breast.
• Bilateral slit-like retraction of nipple of long duration
• Recurrent abscess and recurrent fistula are other complications.
• Routine mammogram-microcalcification
• Palpable subareolar mass
Management
• FNAC to confirm diagnosis.
• Antibiotics, drainage, excision of all major ducts (Fig.9)



Periductal mastitis at surgery. It was feeling hard (*Courtesy:* Dr Geetha, Associate Professor of Surgery, KMC, Manipal)

Fig.9

IDIOPATHIC GRANULOMATOUS MASTITIS

• Often patients present with features of mastitis (nonlactating) with pain, nipple retraction, lump in the breast.
• Some of them are treated with antituberculous treatment with FNAC, trucut or even biopsy findings of granuloma but they are nontuberculous.
• When tuberculosis, sarcoidosis, diabetes and Wegener's granulomatosis are excluded, the diagnosis of idiopathic granulomatous mastitis is made.
• Characteristic histological features include multinucleated giant cells,epithelioid histiocytes-noncaseating.
• Possible aetiological factors are trauma, hyperprolactinaemia, local irritation.

Treatment
• Symptomatic treatment to decrease pain and fever
• Steroids-3040 mg prednisolone or 3 to 6 months period.
• Refractory cases need to be treated with surgery.

DISCHARGE PER NIPPLE
Nipple discharge
It is a common problem encountered in the outpatient department. It can be physiological such as lactational and or pathological rom various causes.
The clinical evaluation of the case of nipple discharge consists of following history examination.

1. Nature of the discharge

• Serous	Fibrocystic disease
	Duct ectasia
• Bloody	Duct papilloma
	Duct ectasia
	Duct carcinoma
• Greenish	Duct ectasia
• Milk	Lactational
	Nonlactational-Hyperprolactinaemia
• Yellow (purulent)	Breast abscess

2. Unilateral or bilateral: Duct papilloma is unilateral; fibrocystic disease and hyperprolactinaemia are bilateral.
3. Single or multiple ducts: Duct carcinoma/duct papilloma involves single duct, but fibrocystic disease affects multiple ducts.
4. Spontaneous discharge is typical of duct papilloma. Blood stained discharge on pressing the mass may be seen in carcinoma breast.
5. Related to menstruation: This is seen in fibrocystic disease and patients who are taking oestrogen replacement therapy.
6. Discharge with mass:

Tender mass-fibrocystic disease breast abscess
Nontender mass-carcinoma

Localisation
• Mammogram and ultrasound to detect any mass, any cystic lesions. Very often they do not help in the diagnosis.
• Prolactin levels, thyroid hormone profile (rarely hypothyroidism can cause discharge per nipple)
• Cytological examination of bloody discharge for malignancy
• Ductoscopy has been done but not very successful.

Treatment
• Rule out carcinoma-fast
• Watery/serous discharge needs reassurance after ruling out fibrocystic disease
• A duct papilloma requires microdochectomy
• Discharge from multiple ducts or origin of the discharge is not clear-'core excision' of major ducts should be done (Hadfield operation).

DUCT PAPILLOMA
• It is a benign lesion of the breast, usually single and unilateral, rarely multiple.
• Middle-aged women are affected and present with bleeding per nipple(Fig. 10).

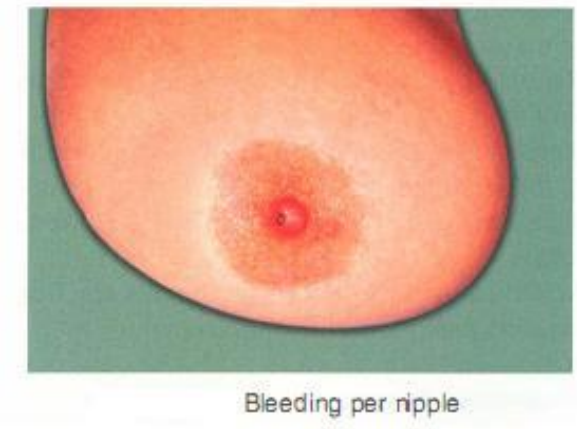
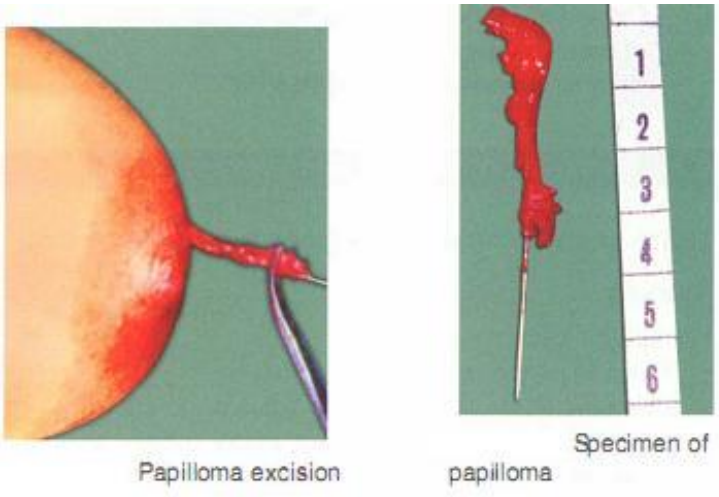


Fig. 10

• The tumour is situated in one of the larger lactiferous ducts.
• It presents as a small swelling just beneath the areola, palpation of which results in discharge of blood.
• Since, it is a premalignant condition, it is treated by microdochectomy.
• Microdochectomy: The opening of the lactiferous duct discharging blood is identified. It is probed with lacrimal probe or a straight needle. A small triangular piece of skin, along with the needle, and a wedge of breast tissue to a depth of about 4-5 cm is removed (Figs 11).



Figs 11

• Hadield's operation: Cone excision of the lactiferous ducts is done when duct of origin of nipple bleeding is uncertain. A circumareolar incision confined to one-third of the circumerence is given and deepened. The flap is better not raised to avoid necrosis of areola. A core or cone of breast tissue from nipple to pectoral fascia or about 5 cm length is removed. Most of the ductal papilloma will be located within 5 cm from the nipple.

AXILLARY TAIL HYPERTROPHY

• More commonly it is the enlargement of axillary tail of Spence
• It is usually bilateral and feels like fatty tissue, lobular, soft to firm. This is how it is differentiated from lymph nodes in the axilla.
• Causes can be a physiological at puberty or during premenstrual/menstruation period or can be a part of 'ANDI'
• Pregnancy is also one of the causes of enlargement
• Rarely 'ectopic' axillary breast tissue other than tail of the breast may be present along the milk line.
• Usually reassurance is all that is required.
• Pain and cosmesis are the indications for removal.

TRAUMATIC FAT NECROSIS

T: Trauma either by a direct blow or by a seat belt or trivial contraction of pectoralis major. Sometimes no history of trauma.
R: Retraction of nipple, palpable hard lump, tethering of skin mimic carcinoma
A: Acids-fatty acids and glycerol released due to injury to the at causes saponification
U: Unusually large, pendulous breasts are affected more often
M: Middle aged women with, microcalcification in mammography-mimics carcinoma
A: Age around 40 to 50 years
T: Treatment-Biopsy/excision of the lumps
I: Immediate reconstruction is possible
C: Can develop after tamoxifen therapy and, after any type of breast surgery

You can remember as TRAUMATIC.

1. Following are true or lymphatic drainage of the breast except:
    A. Apical nodes are also called infraclavicular nodes
    B. Apical nodes drain into subclavian lymph trunk
    C. Posterior third of the breast drain into supraclavicular nodes
    D. For detection of sentinel node, ideal site is subdermal plexus around nipple
2. Following are true for advantages of MRI in the breast except:
    A. It is the best modality or women with breast implants
    B. Screening in women with strong family history
    C. It is also better than ultrasound to image axilla
    D. It can distinguish scar from recurrence in women who have undergone breast conservative surgery
3. Following are true for retraction of the nipple except:
    A. Slit-like retraction is seen in duct ectasia
    B. Circumferential retraction is seen in carcinoma breast
    C. Extension of the growth along lactiferous duct causes retraction of the nipple
    D. Horizontal retraction can occur at puberty suggests fibroadenosis
4. Following are true Lactational mastitis except:
    A. Retracted nipple is one of the cause
    B. Majority of the cases are due to anaerobic infection
    C. Repeated aspiration is recommended treatment
    D. Fluctuation is a late sign
5. Smoking is associated with which of the following breast disease?
    A. Tuberculosis
    C. Duct ectasia
    B. Breast abscess
    D. Mondor's disease
6. Following is not the common sign of Periductal mastitis:
    A. Discharge per nipple
    B. Indurated mass
    C. Fistula
    D. Circumferential retraction of the nipple

7. The widely used first investigation of choice in a lady of 25 years with lump breast is:
    A. Ultrasonography
    B. CT scan
    C.MRI

D.FNAC

8. Which one of the following is not the treatment for mastalgia?
   A. Evening primrose oil
   B. Danazol
   C. Steroids
   D. Bromocriptine
9. Following are true for Phylloides tumour except:
   A. Usual age of presentation is 20 years
   B. Large tumour with bosselated surface
   C. It may have high mitotic index
   D. Rarely develop into sarcoma
10. Which one of the following is the treatment of choice or early breast cancer in a 30-year-old lady who is 4 months pregnant?
   A. Chemotherapy
   B. Tamoxifen
   C. Local wide excision
   D. Modified radical mastectomy

ANSWERS:
1-C 2-C 3-D 4-B 5-C 6-D 7-A 8-C 9-A 10-D

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