

Clinico - Pathological Study of Lump Breast - A Study of 100 Cases

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Abstract: Breast is an apocrine gland – a modified sweat gland derived from ectoderm, acts as secondary sexual organ in females. It is rudimentary in males. It acts as mammary glands in females which produce and secrete milk to feed infants. Breast lumps are localized swellings that feel different from the surrounding breast tissue. It is a symptom/sign for a variety of conditions which on most occasions are nonmalignant. Approximately 10% of breast lumps ultimately lead to a diagnosis of breast cancer. Causes of breast lump can be classified on clinical and pathological basis. Patients were studied on the basis of triple assessment i.e. clinically, radiologically and histopathology. Our aim is to study breast lump clinically and pathologically of all the patients presenting with breast, to know the frequency of different type of breast disease, to know the change in pattern of breast disorders, to know the frequency of Benign vs Malignant breast disorders and to study the cyclic changes presenting with lump in benign breast disease in reproductive age group.

Keywords: Breast lump, Duct Ectasia, Phylloides Tumor, FNAC, Carcinoma Breast.

I. Introduction

Breast is an apocrine gland – a modified sweat gland derived from ectoderm, acts as secondary sexual organ in females. It is rudimentary in males. It acts as mammary glands in females which produce and secrete milk to feed infants.¹

Breast development and function are initiated by a variety of hormonal stimuli, including estrogen, progesterone, prolactin, oxytocin, thyroid hormone, cortisol, and growth hormone and function. Estrogen initiates ductal development, whereas progesterone is responsible for differentiation of epithelium and for lobular development. Prolactin is the primary hormonal stimulus for lactogenesis in late pregnancy and the postpartum period. It upregulates hormone receptors and stimulates epithelial development. The secretion of neurotrophic hormones from the hypothalamus is responsible for regulation of the secretion of the hormones that affect the breast tissues.

Breast lumps are localized swellings that feel different from the surrounding breast tissue. It is a symptom /sign for a variety of conditions which on most occasions are nonmalignant. Approximately 10% of breast lumps ultimately lead to a diagnosis of breast cancer. Causes of breast lump can be classified on clinical and pathological basis.

Pathological Classification of benign breast disorders causing breast lump

Non-proliferative disorders of the breast

- Cysts and apocrine metaplasia
- Duct ectasia
- Mild ductal epithelial hyperplasia
- Calcifications
- Fibroadenoma and related lesions

Proliferative breast disorders without atypia

- Sclerosing adenosis
- Radial and complex sclerosing lesions
- Ductal epithelial hyperplasia
- Intraductal papillomas

Atypical proliferative lesions

- Atypical lobular hyperplasia
- Atypical ductal hyperplasia

The basis of pathological classification is based on histopathological findings.

Clinically physiological swelling

- Nodularity
- Breast pain
- Nipple discharge
- Breast infection
- Trauma

Lump can also be classified as

- Congenital
- Infection
- Duct ectasia
- trauma/ haematoma
- Gnaecomastia in males
- ANDI

Pregnancy related

- Galactocele
- Puerperal abscess

ANDI (Aberrations of Normal Development and Involution)²

The basic principles underlying the aberrations of normal development and involution (ANDI) classification of benign breast conditions are the following:

1. Benign breast disorders and diseases are related to the normal processes of reproductive life and to involution;
2. There is a spectrum of breast conditions that ranges from normal to disorder to disease; and
3. The ANDI classification encompasses all aspects of the breast condition, including pathogenesis and the degree of abnormality

Diagnosing breast cancer:

In 33 percent of breast cancer cases, the woman discovers a lump in her breast. Other less frequent presenting signs and symptoms of breast cancer include (1) Breast enlargement or asymmetry; (2) nipple changes, retraction, or discharge; (3) ulceration or erythema of the skin of the breast; (4) an axillary mass and (5) Musculoskeletal discomfort. However, up to 50 percent of women presenting with breast complaints have no physical signs of breast pathology. Breast pain usually is associated with benign disease.

II. Review of literature

Hippocrates (460 to 370 BC) knew about breast disease. He recognized nature of malignant disease which was called as karkicoma. Galen (131 to 201 A.D) inscribed had classical observations, when he compared a breast tumour with a crab. Just as crabs has its legs on its sides, so in this disease the veins extending out from unnatural growth takes the shape of crab legs. Among the conditions described are cystic disease of breast, breast pain and fibroadenoma. He divided two main groups - painful nodularity and non cyclic breast pain.³

Koering called the diseases “chronic cystic mastitis” because he believed that it had an inflammatory basis at the same time. Schimmelbush describe the same condition, compounding the problem by calling it “cystadenoma”.⁴

They occur most frequently in women older than 50 years with mean age being 48 years.⁵ In a study of 370 cases of intraductal papilloma. Xin li et al (2012) found that the mean age of patients in this study was 51.0 (range, 12–86) years. 190 (51.6%) of 370 patients were 50 years or older. Among these lesions, 55.7% were from the left breast, 43.2% were from the right breast, and 1.1% were bilateral.⁶

Gupta et al (1983) have reported 15 cases of breast abscesses in their study of 1104 cases of breast lump in Jabalpur area.⁷ In a study conducted by Sandhu GS et al of 50 cases of breast abscess, 36% were reported in females belonging to age groups between 36 to 45 years while 20% were between the age groups of 26-35 years and 18% fell in the age group of 46-55 years..

Oberman (1965) has reported in the study of 18 cases of cystosarcoma phylloides that the age of more than 2/3 of the patients was above 40 years of age.⁸ The youngest patient was of 23 years of age. Haque et al (1980) however recorded lower age group as compared with the other co-workers average age found was 28 years.⁹ Haagensen(1971) reported mean age of 44.7 years.

Gupta et al have also reported conditions like adenosis, mammary dysplasia, fibrosclerosis, gynaecomastia under the heading of benign neoplastic lesions.the incidence of various conditions as reported by them, out of 328 cases examined was mammary dysplasia10.%, cystosarcoma phylloids5.5%, fibrosclerosis 0.9% gynaecomastia6.1%, leiomyoma0.3%, papilloma 0.6%, osteoma 0.3%.

About 5% to 10% of breast cancer cases are thought to be hereditary, meaning that they result directly from gene defects BRCA1 and BRCA2. The most common cause of hereditary breast cancer is an inherited mutation in the BRCA1 and BRCA2genes families with BRCA1 mutations the lifetime risk of breast cancer on average seems to be in the range of 55 to 65%.⁹ For BRCA2 mutations the risk is lower, around 45% Breast cancer risk is higher among women whose close blood relatives have this disease. Having one first-degree relative (mother, sister, or daughter) with breast cancer approximately doubles a woman's risk. Having 2 first-degree relatives increases her risk about 3-fold. Most (over 85%) women who get breast cancer *do not* have a family history of this disease.¹⁰

Studies have shown that using combined hormone therapy after menopause increases the risk of getting breast cancer. It may also increase the chances of dying from breast cancer.¹¹⁻¹³ Harmonal contraceptives might produce a slight increase in the breast cancer diagnosis in the current and the recent users.¹⁴

Some studies suggest that breastfeeding may slightly lower breast cancer risk, especially if it is continued for 1½ to 2 years.¹⁵

Compounds in the environment that have estrogen-like properties are of special interest. For example, substances found in some plastics, certain cosmetics and personal care products, pesticides (such as DDE), and PCBs (polychlorinated biphenyls) seem to have such properties. In recent years studies have found that long-term heavy smoking is linked to a higher risk of breast cancer The 2014 US Surgeon General's report on smoking concluded that there is "suggestive but not sufficient" evidence that smoking increases the risk of breast cancer.^{16, 17}

III. Aims and objectives

1. To study breast lump clinically and pathologically of all the patients presenting with breast lump in surgery OPD and indoor of GMC, Amritsar.
2. To know the frequency of different type of breast disease.
3. To know the change in pattern of breast disorders.
4. To know the frequency of benign vs Malignant breast Disorders.
5. To study the cyclic changes presenting with lump in benign breast disease in reproductive age group.

IV. Material and methods

The study was conducted after approval from institutional thesis and ethics committee. Informed consent of the patient was taken and in case the patient was below 18 years, the informed consent from his/her parents/guardian was taken.

The present study was conducted in the department of Surgery of Guru Nanak Dev Hospital attached to Govt. Medical College, Amritsar. All patients were examined clinically, then were subjected to mammography/ultrasonography and those having lump in breast were subjected to FNAC. Present study included 100 cases of breast lump.

Inclusion Criteria:

1. All cases of lump breast were under study irrespective of age and sex.
2. All cases of carcinoma breast at any stage(TNM).
3. All cases of loco-regional recurrence
4. All cases whether considered for Breast conservation or mastectomy.
5. All cases diagnosed with mammography/ultrasound for multicentricity.
6. All cases diagnosed with FNAC.

Exclusion criteria: Unwilling patients or those who did not give their consent.

The patients of all ages were considered. Clinical examination was done to assess the nature and extent of the disease. Diagnosis was made on local examination of the breast. All quadrant of breast were examined for any lump in the breast. Both breasts were examined along with axillary lymph node examination on both sides. The patients who previously had any breast disorder and now re-presented with a breast lump were also considered. The patients who were at suspicion or borderline were subjected to Ultrasonography/

mammography and FNAC. Ultrasonography was got done for patients under 35 years and Mammography was got done for patients above 35 years

Patients were studied on the basis of triple assessment i.e. clinically, radiologically and histopathology. Results were collected and tabulated on the above parameters.

V. Observations

The present study of 100 cases of breast lump was done in surgical department of government medical college, Amritsar as per proforma and all related factors were recorded. Patients were then subjected to physical examination, mammography, ultrasonography, FNAC and histopathology.

5.1 Age Wise Distribution:

In this study of 100 cases of lump breast, it was noted in this study that the majority of breast diseases presents in the reproductive age group of 21-40 years of age (53 cases) only 12 cases below the age group of 20 years and remaining 35 cases presented above the age of 40 years.

Table-1 Showing Age Wise Distribution

| Age in years | Number of cases | Percentage |
|--------------|-----------------|------------|
| <20 | 12 | 12% |
| 21-40 | 53 | 53% |
| >40 | 35 | 35% |
| TOTAL | 100 | 100% |

5.2 Gender Distribution:

In this study of 100 cases, it was found that breast diseases is largely more common in females (96 cases) than males (4 cases).

Table – 2 Showing Gender Distribution

| Sex | Number of cases | Percentage |
|--------|-----------------|------------|
| Female | 96 | 96% |
| Male | 4 | 4% |
| Total | 100 | 100% |

5.3 Side Affected Overall In All Cases Of Breast Lump:

In 100 cases it was found that breast lumps were found to be slightly more common in the right side (51 cases ie; 51%), than in the left (46 cases ie; 46%), with a few cases having bilateral presentation (3 cases ie; 3%).

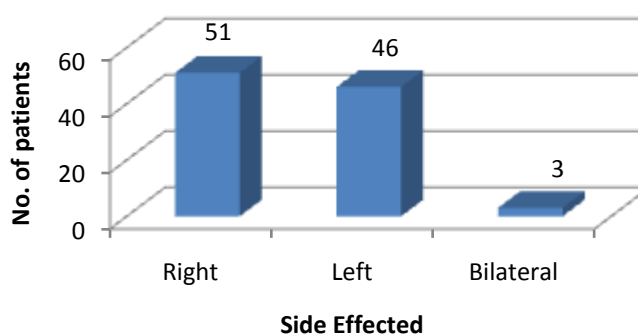


Chart No. 1 - Showing Side Affected

5.4 Distribution Of Lump According To Size

In our study the majority of the patients (38%) approached clinics with a lump size of 2cm or less in any dimension. Their number was 38. Many patients still presented late with lump size over 5 cms.

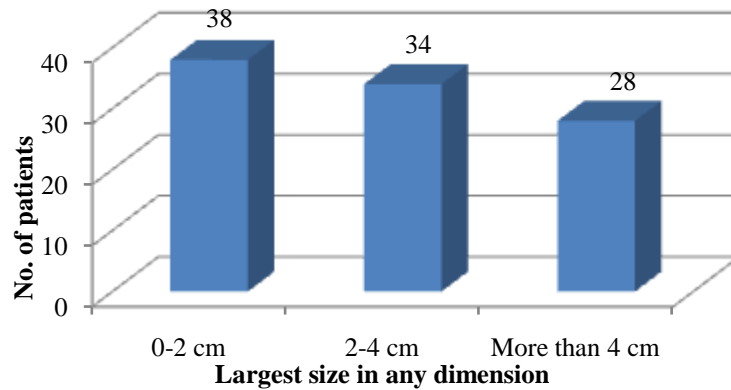


Chart No. 2 - Showing Size of Lump In Any Dimension At Presentation

5.5 Quadrant Involved In All Cases:

It was observed that among all the quadrants involved in cases of lump the majority was constituted by the outer upper quadrant and the nipple areola complex, constituting 25 cases (25%) each.

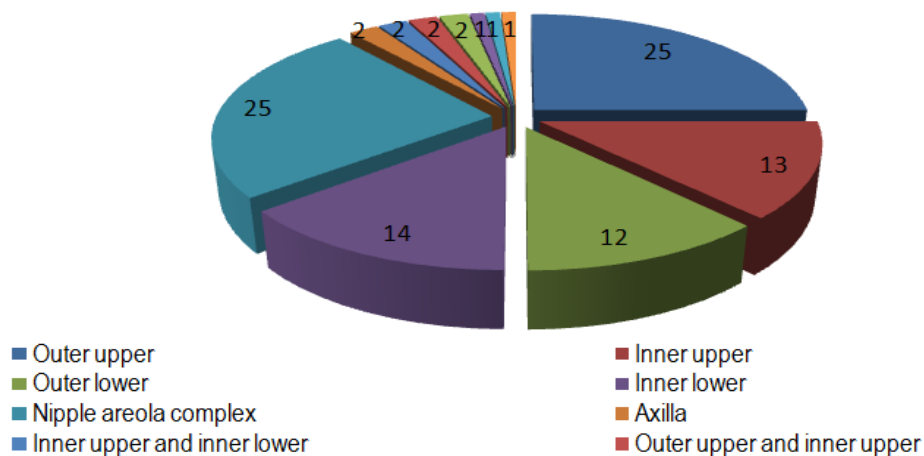


Chart No. 3 - Quadrant Involved In All Cases

5.6 Distribution Of Lump According To The Various Disease Spectrum On Histopathology

In this study it was found that 45% of all benign breast diseases were fibroadenomas (31 cases). It was closely followed by the carcinoma cases that is 30 in number. Fibrocystic disease comprised of 11 cases among 100 cases of breast lump.

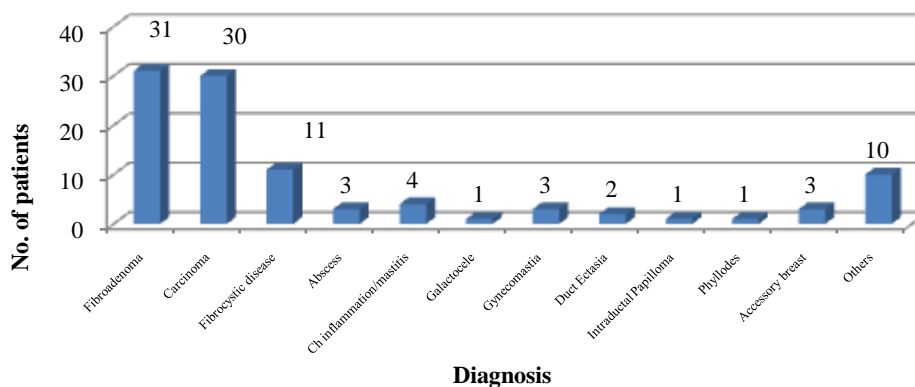


Chart No. 4 - Showing Spectrum Of Lump On Histopathology

5.7 Distribution Of Cases Between Benign And Malignant

In the study of 100 cases of lump breast majority of the patients with breast diseases comprised of benign in nature (69 cases) and the rest were malignant (30 cases). One case of pagets disease was also recorded.

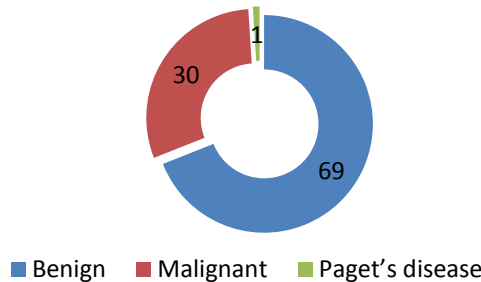


Chart No. 5 - Showing Distribution Of Cases Between Benign And Malignant

5.8 Side Affected In Cases Of Fibroadenoma

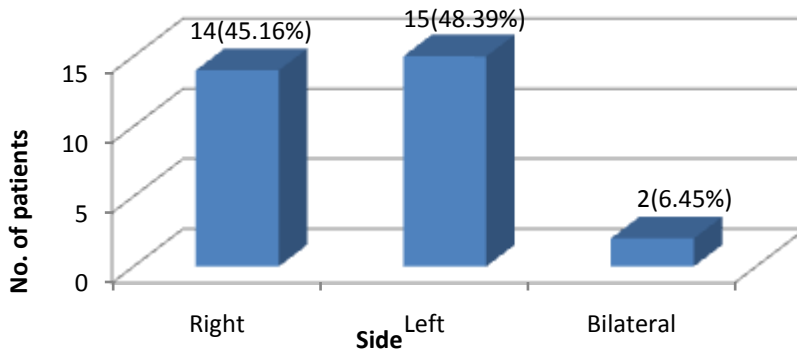


Chart No. 6 - Side Involved In Fibroadenoma Cases

5.9 Quadrants Involved In Fibroadenoma Cases:

In the fibroadenoma cases which were studied the lump involved outer upper quadrant and the inner upper quadrant in the majority of the cases.

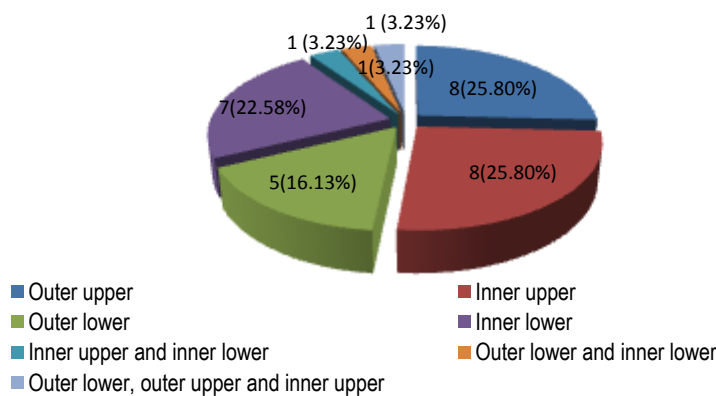


Chart No. 7 - Quadrants Involved In Fibroadenoma Cases

5.10 Side Affected In Malignant Diseases:

There were a total of 30 cases of malignancy out of 100 cases of the lump breast, out of which right breast was involved in 16 cases whereas left breast was involved in 14 cases.

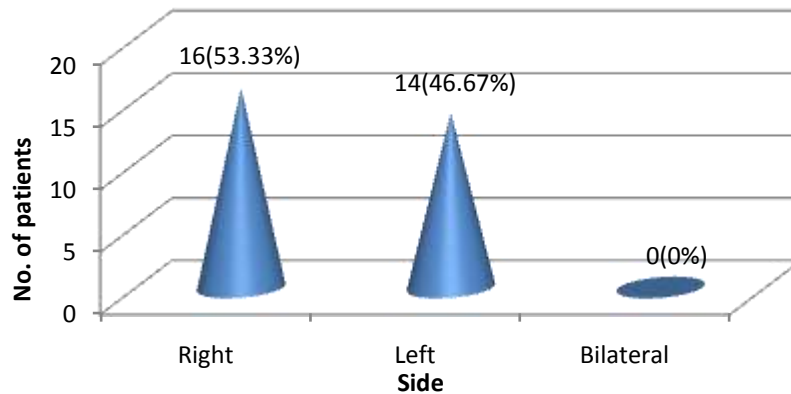


Chart No. 8 - Showing Side Affected In Malignant Diseases

5.11 Quadrants Involved In Malignant Lump:

In case of malignancy nipple areola complex was affected the most that is 14 times and outer upper quadrant was involved in 9 times.

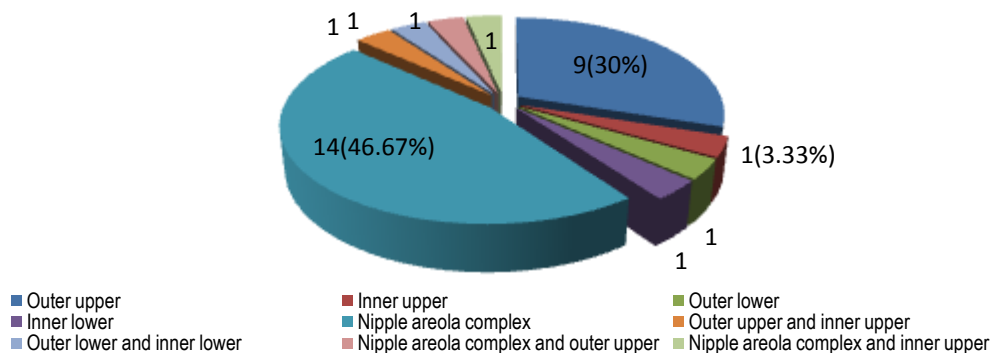


Chart No. 9 - Showing Quadrants Involved In Malignant Lump

5.12 Distribution Of Carcinoma:

In this study it was noted that intraductal carcinoma accounted for 70% of all the malignant breast diseases (21 cases).

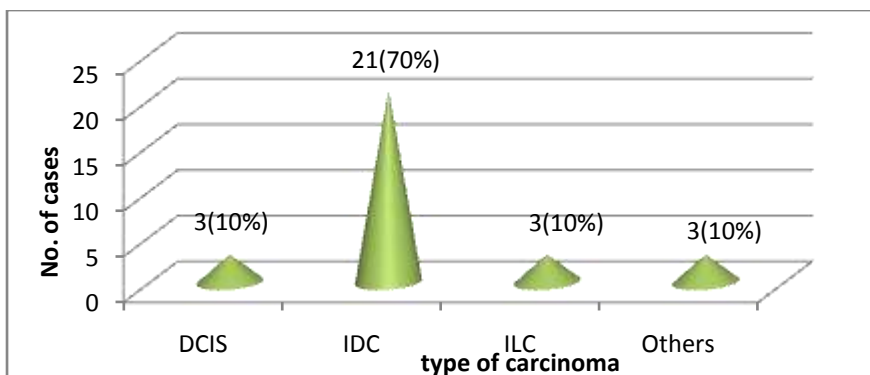


Chart No. 10 - Showing Distribution Of Carcinoma

5.13 TNM Stage Of Carcinoma At Presentation

In the present study patient presented in various TNM stages on presentation in Surgery Department of Guru Nanak Dev Hospital. It was found that maximum patients presented in advanced stage of carcinoma. Most of the patients had T3N2M0 stage of carcinoma.

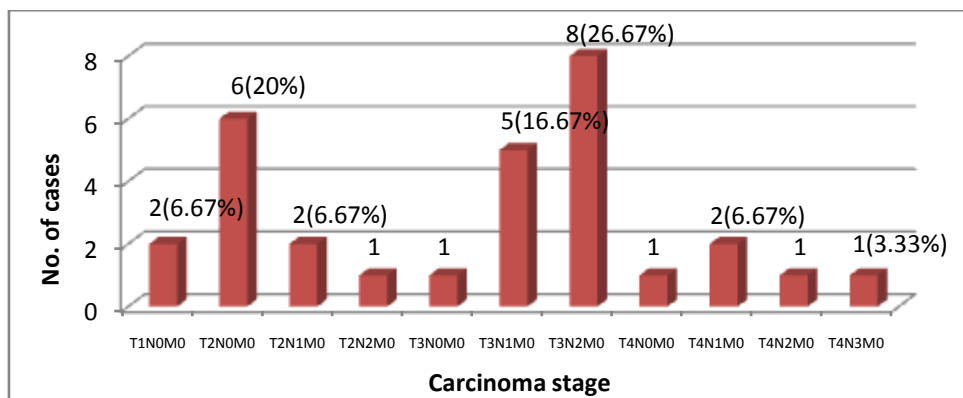


Chart No.11 - Showing Tnm Stage Of Carcinoma At Presentation

5.14 Size Of Lump On Presentation To Hospital In Carcinoma Patients:

In our present study, majority of the carcinoma patients presented in T3 stage that is more than 5 cm in size, followed by the T2 lesions.

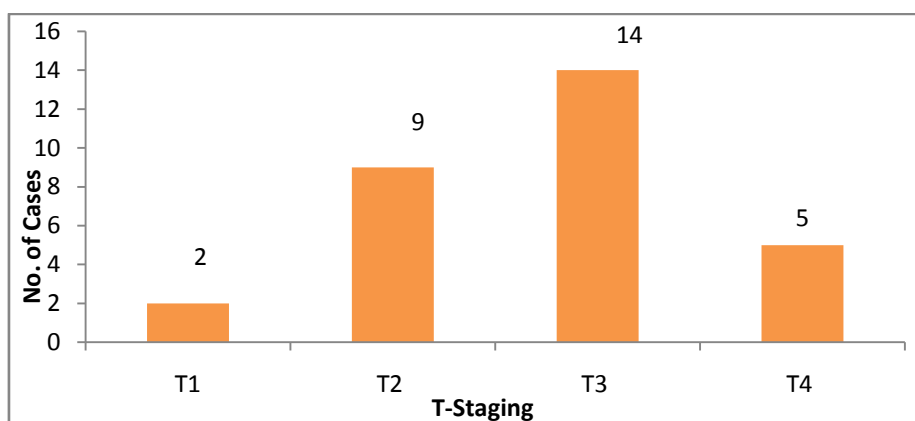


Chart No.12 - Size Of Lump On Presentation To Hospital In Carcinoma Patients

5.15 Lymph Node Status Of 30 Cases Of Ca At The Time Of Presentation To Hospital:

In the present study the lymph node status of the patients was assessed at the time they presented to seek medical help at Guru Nanak Dev Hospital... the following recordings were recorded, the majority of the patients falling in N2 stage and N0 stage that is 10 cases each.

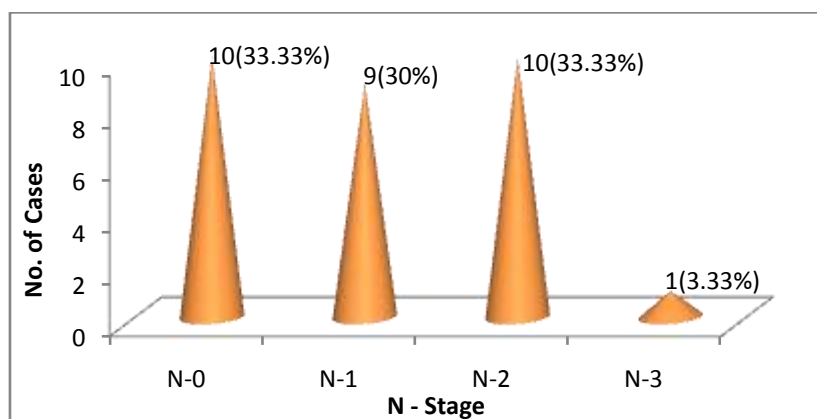


Chart No.13 - N Stage Presentation

5.16 Differentiation Of The Lump As Per FNAC In 100 Patients Who Underwent FNAC.

In the present study, on FNAC fibroadenoma emerges to be most frequent diagnosis in patients of lump followed by the carcinoma cases.

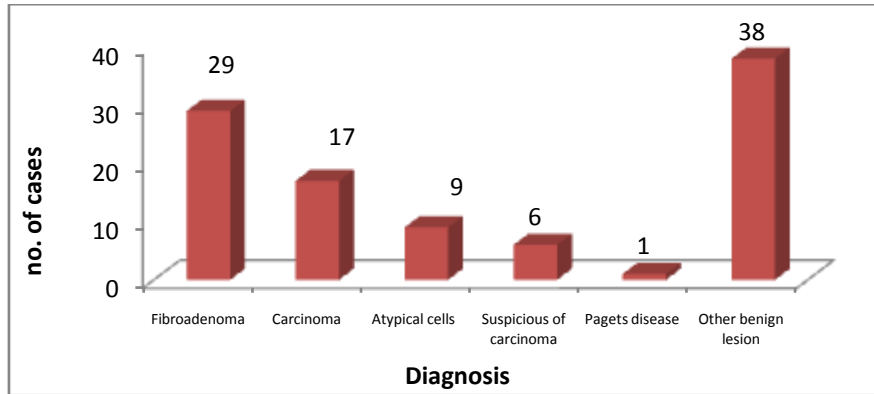


Chart No.14 - Showing Spectrum According To Fnac

5.17 FNAC: Tool To Differentiate Between Benign And Malignant

It was observed that when 100 cases which went under FNAC testing prior to surgery were correlated to the histopathology report, FNAC misdiagnosed a few cases. It was seen that out of 9 reports which showed atypical cells, 7 had carcinoma whereas other two showed features of benign disease on histopathology. Sensitivity for the malignant disease being 100% whereas sensitivity to identify benign being 97.18%.

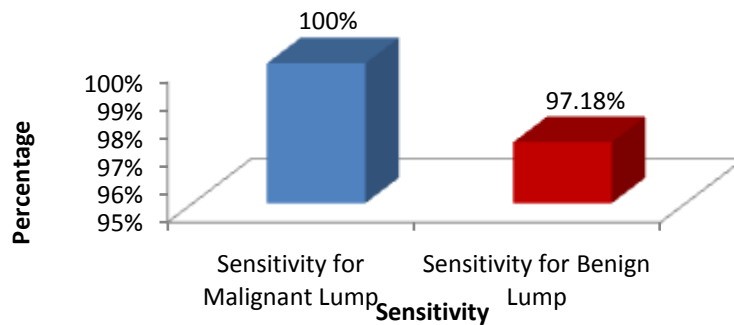


Chart No. 15 - Fnac: Tool To Differentiate Between Benign And Malignant

5.18 Sonomammographical Division Of Breast Lump

In our study, USG differentiated breast lesion in solid, cystic and cystic lesions with solid component. The solid lesions were recorded to be the most that is 44 out of 67 who underwent USG.

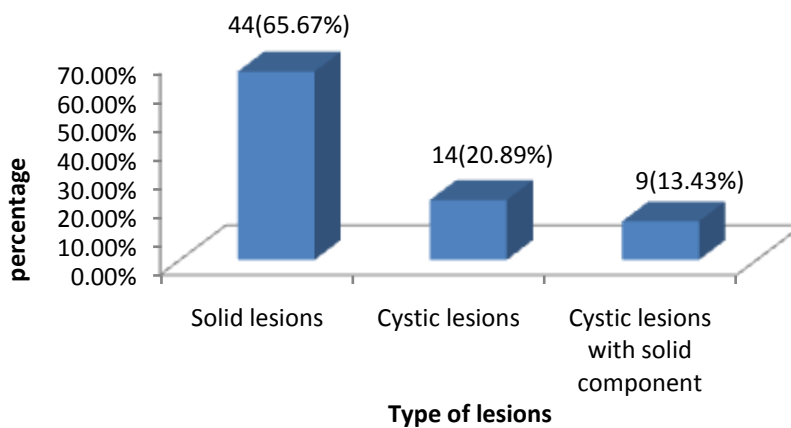


Chart No.16 - Sonomammographical Division Of Breast Lump

VI. Discussion

The main objective of the present study was to become conversant with percentage of various types of breast disorders including both benign and malignant, the role of investigation in diagnosing these breast lesions, the changing pattern and to study the correlation of benign and malignant breast diseases.

The benign neoplastic and non-neoplastic conditions account for majority of the breast lumps. The data from patients reporting to the department of surgery of Guru Nanak Dev Hospital Amritsar has been collected to compare the disease prevalence and report various other parameters associated with breast diseases.

In the present study a total of 100 cases were examined clinically and pathologically. In addition to these patients were subjected to go under sonomammography.

In present study, fibroadenoma has the lead (31%) followed by carcinoma breast (30%), breast abscess, chronic granulomatous pathology (7%). Similar results have been reported by Baptist SJ et al study of benign breast disorders.¹⁸ Haque A et al, Gupta JC reported fibroadenoma more common than fibrocystic diseases followed by other benign lesions.^{7, 19}

Disorders of Development

Fibroadenoma:

This non-proliferative benign tumours formed 31% of the total cases. In our study the average age is 25 years. In our study left breast involvement is in 15 out of 31 cases(48.39%). than right breast 14 out of 31 (45.16%) cases of fibrodenoma, other 2 out of 31 (6.45 %) cases had bilateral involvement. Haque A et al and Gupta JC et al noted higher involvement of left breast (52%).In our study average size of lump was 2.5 cm, other ranging between 1-5 cm.^{7, 19} largest being 5 cm.Robbins LS et al reported a giant size of 10 cm. In this study presence of discrete painless, freely mobile lump was the main presentation in 93.55% cases. 6.45% had painful nodule and 12.90 % with two or more nodules in a single breast. Almost similar report were given by Haagenson and Robbins.^{5, 20}

Phylloides Tumor:

In present study Phylloides tumor constituted only 1% of the total 100 cases (only one case was reported) of breast lump, whereas the observation made by Haagensen (1971) 2.3% and Haque et al (1980) 1.5%.^{5, 19}. In our study, patient was 40 years old. Phylloides tumor as a tumor of old woman was observed by Oberman (1968), Haagensen (1971).^{5, 8}. In present study, right side was involved by tumor involving nipple areola complex and measuring 10*6 cm. Oberman (1961) reported in 50% cases the size was more than 5 cm.⁸ Robbins (1974) reported that these tumours attain size upto 10-15 cm.²⁰

Disorders of Cyclical Changes:

Benign Duct Papilloma:

In present study only 1 case of benign duct papilloma was reported. The age of the patient was 42 years. Robbins et al mentioned the age range of intraductal papilloma to be 35-50 years. In a study by Haagensen (1971) mean age for duct papilloma was 48 years.⁵ This condition is rare before the age of 25 and usually occurs between 35-50. Xin li et al (2012) found that the mean age of patients in this study was 51.0 (range, 12–86) years. 190 (51.6%) of 370 patients were 50 years or older.⁶

The patient presented with complaint of nipple discharge and there was palpable lump in subareolar region. Haagensen et al (1971) reported, with only 1 case having palpable lump, one having nipple discharge and two patients having both lump and discharge.⁵

Disorders of Pregnancy and Lactation:

Breast Abscess, chronic Mastitis:

It formed 7% of total breast diseases. Haque A et al, Gupta JCreported 4%, 1.37% and 1.1% incidence.^{5, 7} These studies were only done for benign breast diseases. Mean age of involvement was years involving mainly females in the lactational and puerperium period. These results are comparable with Haque A et al.¹⁹ In a study conducted by Sandhu GS et al of 50 cases of breast abscess, 36% were reported in females belonging to age groups between 36 to 45 years while 20% were between the age groups of 26-35 years and 18% fell in the age group of 46-55 years. In our study of 3 cases of breast abscess, 2 were below 30 years of age. Non lactating patients of breast abscess comprised the major group (67%) in comparison to lactating group (33%).²¹ similar result was obtained in our study. Most of the cases presented as having breast mass, pain was the prominent symptom. Fever was presented in all the cases, associated with tachycardia and leucocytosis.²²

Galactocele:

In present study 1 case of galactocele was reported out of total 100 cases of breast lump i.e 1%. Haque et al (1980) showed 0.5% cases of galactocele out of 200 cases. The patient was lactating female who presented with breast engorgement and nipple discharge. Same observations were made by Haque et al (1980) and Haagensen (1971).^{5, 19}

Disorders of Involution:

Duct Ectasia:

In present study 2 cases of Duct Ectasia were reported out of 100 (2%). Haque et al (1980) reported 1.5% cases and Gupta et al (1983) reported 1.36% cases of duct ectasia in their studies. Out of the total 2 cases of duct ectasia one was 40 years old and other was 50 years old.⁷ Haagensen (1971) showed mean age of 52 years for duct ectasia. Hughes have found it to be a frequent lesion of menopause. In our study, one case involved the right breast whereas the other involved the left. They described lesions were mainly unilateral and in sub-areolar region. Patients presented with the complaint of nipple discharge which was mainly serous.⁷ One patient complained of mild pain. These observations were more or less similar to observations made by Haagensen (1971), Haque et al (1980), Hughes.^{23, 5, 19}

Cystic Disease of Breast:

Cystic hyperplasia and fibrocystic disease seems to be associated with some hormonal abnormality such as estrogen excess. In our study this disease formed 11% of breast diseases. Haque et al (1980) in a study have found 3 cases of cystic disease in a study of 200 cases of breast lump.¹⁹ Gupta et al have described 76 cases of cystic disease out of total of 1104 cases of breast lump in Jabalpur area.⁷ The average age of the patients has been 40.7 years. Gupta et al have described maximum incidence of benign breast disease upto the age of 40 years. Dixon et al said that cystic disease occur most frequent in women between age of 38 and 53.²⁴ Kneeece, J. (2003). Love, S. (2000) Chart et al maintained the most common age is between 30 years and menopause. After that, fibrocystic breast condition rarely occurs, except in some women on hormone replacement therapy.^{22, 25, 26} Ellis H and Cox PJ described the mean age 40 years.²⁷

Accessory Breast:

In present study 3 cases of accessory breast tissue was reported. Patients presented with complaint of lump in right axilla. Right breast was normal. FNAC of lump revealed fibrofatty tissue similar to immature breast tissue.

Gynaecomastia:

It was the most commonly encountered breast disease in males contributing 3 cases out of the 100 cases. This result is comparable to 3.9% and 4% of cases recorded by Ife and Kano. In our study patient were of 22, 25 and 45 years of age. Ife and Kano observed a bimodal age group of presentation was observed at <30 years of age and >55 years of age. 15 patients were of <30 years of age and 7 patients were >55 of age.^{28, 29}

Miscellaneous Benign Breast Disease:

Only 1 case of lipoma was reported in the study presenting in patients with age group >50 years. Patients presented with complaint of lump. No separate study has been reported till date.

Carcinoma Breast:

A total of 30% cases of carcinoma breast were reported in this study. According to Haque et al 48% cases of malignant breast lumps were reported. In this study average age of involvement was 51.5 years which is less compared to that in western literature where the mean age of diagnosis is 54 years. Maximum number of cases were reported in the age group of 41 years or above which were comparable with the studies done by Haque A et al, Gupta JC et al.^{26, 32} According to present study right breast (53.3%) was more commonly involved than the left breast (46.7%), with nipple areola complex and upper-outer quadrant separately involved in 46.67% and 30% of the cases respectively. Samir S et al and Sogi O et al reported more of the involvement of the left breast with the outer upper quadrant being affected the most.^{30, 31} Most of the cases reported with painless progressively increasing breast lump.

In present study is the presentation of carcinoma breast tumor size >2 cm in 93.33% of cases. Similar facts have been reported from study conducted by Fishet B, Slack NH, in Saudi Arabia.³² Invasive ductal carcinoma was the most common (70%) of the histopathological diagnosis of carcinoma breast, nearly similar to the study done in Karachi.³³ This type of carcinoma has high mortality rate due to lymph node invasion and metastasis which is closely related to tumor size. A significant 20% of patients were diagnosed at an age of <40 years in the study, which is similar to a study at SGPGIMS, Lucknow done by Aggarwal et al. but only 11% of the patients reported at a similar age in a study conducted by Dinshaw et al. at Tata Memorial Hospital, Mumbai.^{34, 35}

FNAC as a diagnostic tool:

In the present study it played a vital role for management of breast lumps in carcinoma breast the sensitivity of FNAC was found to be 100% with sensitivity being 97.18% for benign disorders. Out of all benign

breast disorders, fibroadenoma was the most common diagnosis that is 29 cases out of 100 which were subjected to FNAC i.e 29%, similar to the study conducted by Khatun et al, Singh et al, and Khemka et al.^{36, 37,38} In a study conducted by Rahman MZ et al observed in 1778 cases underwent FNA, 508 (28.57%) fibroadenoma, 252 (14.17%) carcinoma, 210 (11.81%) fibrocystic changes, 141 (7.93%) abscess, 116 (6.52%) granulomatous lesion.³⁹ Our study has the similar findings. In our study the probability of finding a carcinoma for suspicious and atypical category is 100% and 77.78% respectively. In Surat Medical College, Out of total 515 cases, 138 were correlated in histology. There were no false positive cases. The probability of finding carcinoma on histology, for suspicious and atypical categories was 94.11% and 75% respectively.⁴⁰

Mammography/Ultrasonography:

Of the total 100 cases, only 67 could afford sonomammography. To differentiate between solid and the cystic lesion the accuracy was 100%. There were 44 solid lesions with 14 being cystic and 9 had both the components. For benign breast benign the sensitivity was almost 100% however for breast cancer the sensitivity was 90.9% compared to the study by Flobbe et al.⁴¹

VII. Summary And Conclusion

A complete study of 100 cases of breast lump was done as per proforma and all related factors were recorded. Patients were then subjected to physical examination, mammography, ultrasonography, FNAC and other required investigation wherever indicated.

1. Fibroadenoma was the commonest pathology forming 31% of total breast lump disorders reported during our study. The average age involved was of 25 years with maximum cases were recorded in age group of 18 to 35 years. Patients presented with freely mobile lump in all the cases. Left breast with upper outer and inner upper quadrant was the commonest site involved.
2. 11 cases of cystic disease of breast were reported. 26-45 years of age group was mainly involved. Patients mainly presented with the complaints of pain and lump. Lump was ill defined, soft to firm in consistency, and of variable size.
3. Benign duct papilloma constituted 1% of total benign breast disorders. Nipple discharge was the predominant presenting feature.
4. 3% cases of Breast Abscess were reported. Main presenting features were fever, lump and pain in the breast.
5. Only a single case of Galactocele was reported. Breast engorgement with creamy milky discharge was the main presenting feature. Patients were <35 years of age.
6. 2 cases of Duct Ectasia were reported. Main presenting feature was nipple discharge. Age group involved is 30-40 years.
7. 3 cases were diagnosed with Gynaecomastia. 2 cases were reported in the right side of breast and one in the left. Age of the patients were 40, 22 and 25 years.
8. 4 cases of chronic mastitis, 3 cases of accessory breast, 1 case of Lipoma, 1 case of Galactocele, was recorded. They had chief complaint of lump in the breast.
9. 30 cases of all breast lump were diagnosed with carcinoma breast, out of them majority of the cases presented in four and fifth decades of life. Nodal spreads was present in 66.67 % of the cases. Majority of the patients complained of painless lump followed by bloody discharge from the nipple. On histopathology majority of the cases 70% were diagnosed as invasive ductal carcinoma of the breast.
10. Sonomammography was afforded by 67 patients which showed that 44 patients that is 65.67 % patient had solid component and 20.89 % patients had cystic whereas 13.43% cases had both the components.
11. FNAC was done in 100 cases with sensitivity approaching 98%.
12. Benign breast lesions were recorded to be comprising the bulk of the patients complaining with lump breast (69%). Whereas malignancy or proven carcinoma comprised 30% of the total lump load.
13. During the study following facts were recorded:
 - Carcinoma breast was the second most common type of breast disorder and is on the rise.
 - Most cases of carcinoma breast presented at an advanced stage with already lymph node spread and resulted in unfavourable prognosis.

Although the majority of cases of breast lumps are diagnosed as benign but there is increasing trend in malignancy so every lump should be diagnosed by FNAC, sonomammography and biopsy to rule out the malignancy. In our study of 100 cases 30% are diagnosed as malignant so no case of breast lump should be left undiagnosed.

Thus, our study has attempted to delineate the spectrum of breast lump among patients reporting to Guru Nanak Dev Hospital, Amritsar.

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