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OBSERVATIONAL STUDY ON BENIGN BREAST LUMPS IN PREMENOPAUSAL WOMEN IN TERTIARY CARE RURAL HOSPITAL, LONI, AHMEDNAGAR

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INTRODUCTION

Ninety percent of clinical presentations in women of reproductive age are caused by benign breast illnesses, which are frequent disorders.[1] Breast pain, palpable breast lump, and nipple discharge are the most prevalent issues that women are sent to the surgery outpatient department for.[2] These greatly upset women who believe that any breast symptom is a sign of cancer, which is in line with the well-known "Boyd" adage.[3]-"Every breast lump should be considered possibly cancerous until proven otherwise," although Sir Astley Cooper (1828) has provided evidence of the opposing viewpoint. He states that "women with lumps in their bosoms have frequently been unnecessarily submitted to an operation under the assumption that it is cancerous." "The disease of this organ has been too much considered as being of malignant nature." Throughout her reproductive life and beyond, a woman's breast tissue is constantly changing physiologically due to a variety of hormones.[5] A breast lump is a typical physical symptom of premenopausal women. At least 65% of breast lumps are found by the patient directly. Almost 30% of women have a benign breast condition that needs to be treated at some point in their lives. Of patients who regularly perform self-breast exams, the patient detects more than 85% of identifiable lesions.[6] A lot of research had been done on benign breast diseases, but Hughes et al. (1989) created a thorough classification that combined all the processes of growth, development, and involution known as "Aberration on Normal Development and Involution" (ANDI classification) into a single framework. The following fundamental ideas underlie both involutions and aberrations of normal development:

1. Normal reproductive processes and involution are linked to benign breast disorders and illnesses.
2. There is a spectrum of breast states that includes disorders, diseases, and normal.
3. The pathophysiology and degree of abnormalities of the breast condition are all included in the "ANDI" classification.

Clinical examination-based definitive identification of breast masses is erroneous and unwarranted. Benign lesions might resemble breast cancer symptoms. Tumor doubling time calculations have been used to determine the stage at which a tumor takes on the basis of its diameter, which is typically greater than 1 cm (Wilson, 1975).[8]

The advancement of methods for taking samples from worrisome lumps during a patient's initial clinic visit has been the most significant development in the diagnostic field of breast lesions in recent years (Bauml, 1980). Many of these tissue-

cytology-based approaches have been used, but from a diagnostic standpoint, two tissue-cytology procedures have shown promise: Aspiration cytology 1.

2. Cytology imprinting.

The examination of a smear made from tissue aspirates collected during aspiration is known as aspiration cytology. Even though imprint cytology has a very high degree of diagnostic accuracy, it cannot be used unless the lump is removed entirely or in part.

Mortin and Ellis initially used aspiration cytology in 1926 to diagnose a variety of tumors that originated in the breast, bones, lungs, and numerous other organs. This diagnostic method has several benefits, including simplicity, speed, and a routine outside procedure for detecting breast lumps, in addition to accuracy.

If cytology or histology confirm the diagnosis of fibro adenoma in young women, the patient is free to maintain the lump if she so chooses, as many of these will remain unchanged or go away during follow-up (Wilkinson 1989). When a woman visits the clinic for the first time and receives a definitive diagnosis of a breast lump, the benefits are immense. To rule out cancer, a cytological and/or histological diagnosis is required for any discernible mass. The current study has assessed a number of risk factors linked to benign breast tumors that have been verified by a histological test.

Physical examination sensitivity and specificity are 96% and 66%, mammography examination sensitivity and specificity are 94% and 73%, and FNAC sensitivity and specificity are 90% and 93%, respectively (BUTLER JA VARGHES M.I. WILSON S.E 1999). Kollur SM El Hg (2006) states that FNAC is an extremely sensitive technique for fibro adenoma detection. Mammography is an objective, complementary investigation that enhances the history and physical examination; it should not be used as a replacement for biopsies.[9] When a young woman has thick breasts and finds it difficult to interpret a mammography, USG can help distinguish between a cystic and solid tumor. A chest X-ray for detection will aid in distinguishing between benign and malignant conditions. A reliable and repeatable substitute for surgical biopsy is percutaneous large core biopsy. A mandatory procedure for patients with a dominant breast lump is an excisional biopsy.

Triple assessment: If a patient has a lump or other symptom that raises suspicions about carcinoma, the diagnosis should be established by combining radiological imaging, clinical evaluation, and tissue sampling for histological or cytological investigation. This combination should have a positive predictive value greater than 99.9%. (Pages 829–829) Bailey & Love, 25th Ed., 2008.

Materials and methods

This study was conducted in patients of premenopausal age group admitted in the department of General Surgery MGM, Medical College and Hospital, Navi Mumbai presenting as breast disease in the form of lump, nipple discharge and painful breast.

All patients were subjected to clinical examination and investigations and following protocol was maintained throughout the study.

inclusion criteria

Premenopausal women with breast lump of age group (15-45 years of age)

exclusion criteria

Post-menopausal women diagnosed case of malignant breast lump.

1. Previous lumpectomy.
2. Previous mastectomy-

3. Previous oophorectomy, clinical examination

History-

1. A detailed history was taken and important features recorded.
2. Name, age, sex and relation.
3. Complaints with duration -Lump pain and nipple discharge.
4. History of present illness.
5. History of past illness - Especially removal of previous tumour.
6. Removal of present lump - History of previous prolonged cough to rule out Koch s.
7. Family history - Benign breast disease in mother, sister and daughters.
8. Reproductive and lactational history including marital status onset of oral contraceptive pills and breast feeding.
9. History of trauma.
10. Socio - economic status.

Physical examination

1. General examination- Built, pallor, icterus, cyanosis, oedema, ascites, pulse, respiration, temperature, blood pressure and lymphadenopathy.
2. Local examination- The body above waist was fully exposed and the breasts were examined in the sitting, standing, recumbent position and leaning forward position

Inspection carried out in the following way-

a. With the arms by the side of the body.
b. With the arms raised straight above her head.
c. With the hands on the waist pressing or relaxing command.
d. With the patients bending forward from the waist looking for all the quadrants of breast.

Examination of the nipple

Position and level compared with that of the other side, a Size and shape - Whether prominent, flattened retracted or eroded.

1. Surfaces - Looked for any crack or fissure.
2. Discharge - If any was noted.

Examination of areola-

Examined for any crack, fissure or ulcer tubercle and nodule Examination of skin over the breast looked for any redness, dimpling, retraction, pitting, thickening, puckering, Peaud' orange, ulceration, or fungation.

Examination of breast as whole-

Position size shapes any puckering or dimpling, or ulceration was noted.

Lump

- Any lump inspected for any abnormality
- Examination of arm and axilla-
- inspected for any oedema
- The opposite breast
- Inspected similarly

Palpation

First of all the entire breast is palpated by using flat of the hand for any lump. All the four quadrants: upper outer, upper inner, lower outer and lower inner as well as sub areolar region were palpated. If a lump is palpated in the breast the following points were noted-

a. Local temperature and tenderness
b. Size, shape, surface, margin and consistency and ulceration over the lump were noted. Mobility within the breast was noted. Whether the lump is best felt with the flat of the hand or between thumb and fingers was also noted.
c. Lymph node - Axillary, cervical and supraclavicular lymph nodes examined

E. Systematic Examination

- Chest examination- The chest wall examined and its relation to the lump was noted, skin nodules pleural effusion or consolidation due to metastasis was looked to exclude malignancy.
- Abdominal examination- Liver, spleen and other organs examined to rule our malignancy and evidence of any lump noted.
- Per rectal and per vaginal examination were done to detect metastasis in case of a malignant breast lesion. Investigations
- Blood examination: - Total and differential counts of white blood cells, Hemoglobin, erythrocyte sedimentation rate, bleeding and clotting time
- Routine examination of the urine was done
- FNAC was done in suspected lumps
- FNAC was done in suspected lumps
- Radiological examination: - X-ray chest and bones to detect any secondary
- Ultrasonographic study was done in cystic mass in patients below 35 years
- Histopathological examination done in excised breast mass (excision or incision biopsy material)

Fine needle aspiration cytology (fnac)

Materials used were

1. Hypodermic syringe
2. Glass slides 7.5 cm x 2.5 cm x 13 cm size (blue star)
3. Hypodermic needle 22 - gauge
4. Microscope cover glass - 18 mm x 18mm size
5. Stain and chemicals for staining method

Method of fine needle aspiration cytology

Patients underwent fine needle aspiration for tumors that were either solid or cystic. The technique was applied for both diagnostic and therapeutic purposes. The patient was instructed to sit with the affected breast exposed on a tool. The location was adequately cleaned with an antiseptic. The mass was kept between the left index finger and the thumb for the procedure, which did not need anesthesia. With the syringe held in the right hand and a steady negative pressure applied to it, the 22-gauge needle was pushed into the mass. The needle was moved in various directions within the lump. Once suction was established, the needle was removed. To prevent bleeding and the formation of a hemotome, firm pressure was applied to the puncture site for two

minutes following the removal of the needle. For a full day, pressure dressing was administered. The needle's tiny amount of fluid and cellular material were combined right away on slides in 95% ethyl alcohol.

Staining was done by Papanicolau's method as given below:

a. Slides are removed from fixative and then dehydrated by passing through descending grades of alcohol -
   - ▪
b. Stain with Ham's haematoxylin 2 minutes
c. Rinse in tap water
d. Differentiate in 0.25% aqueous hydrochloric acid
e. Wash in running tap water for 5 minutes
f. Dehydrate the slide passing through ascending grades of alcohol:
   - 50% ethyl alcohol - 6 dips
   - 70% ethyl alcohol - 6 dips
   - 80% ethyl alcohol - 6 dips
g. Rinse in 95% alcohol in two separate containers – 5 dips
h. Stain in EA 36 or EA 65 for few minutes
i. Rinse in changes of 95% alcohol for few seconds j. Dehydrated by passing through absolute alcohol k. Cleaning is done by rinsing in xylene for 2 minutes]. Mounting was then done by mounting media either in DPZ or Canada balsam

Cytological diagnosis

After proper fixation the slides were examined under light microscope for cytological diagnosis. First the smear was examined to determine whether they belong to benign or malignant breast lesions. On the basis of cellular characteristic as given below

Characteristic of cells	Benign	Malignant
Size of cells	Normal	Increased
Adhesiveness	GOOD	Loss of adhesiveness
Uniformity of cells	Present	Pleomorphism
Cellularity	LOW	HIGH
Nuclear chromatin	Coarse but regular	Fine, pale, nuclear
Stepped nuclear	Frequent	Absent
Lymphocytic infiltration	Less	Marked

Most smears were identified as benign or malignant based on the characteristics of the cells stated above; however, in a few cases, no diagnosis could be made because of insufficient aspirates, and in other cases, the diagnosis of malignancy was uncertain.

Accordingly, the smears were categorized as:

1. Benign
2. Malignant

3. Unsatisfactory
4. Suspicious

The pathological diagnosis of the benign smears was established based on the presence of the following cells. Benign smears were further examined to ascertain the pathological nature of the lump.

1. Duct Cells: A class of cells that have tightly clustered, scant blue cytoplasm and oval nuclei with coarse nuclear chromatin.
2. Foam Cells: Massive phagocytic cells with dark, spherical, frequently granular nuclei and eccentric cytoplasm were found to have numerous tiny vacuoles that gave the cells a foamy appearance.
3. Apocrine cell: Metaplastic duct cells with bigger, rounded nuclei compared to duct cells; these cells often have a single nucleus and fine chromatin. They were grouped together and have a lot of basophilic cytoplasm.
4. Nuclei that have been stripped: These have an oval shape, finely homogeneous nuclear chromatin, and no cytoplasm. They may originate from myoepithelial cells and are located next to duct cells.
5. Fat cells: These had distinct cell boundaries, a lot of unstained cytoplasm, and small, asymmetric, black nuclei. They appeared in sheets and clusters.
6. There were also large cells, histiocytes, and lymphocytes visible. In several smears, there were erythrocytes because of aspiration-related injuries.

Based on the common benign breast lump and the cellular characteristics of the smear, a variety of pathological benign lesions were diagnosed.

a. Infective and inflammatory
b. Benign neoplasm
c. Benign conditions as aberration of normal development and involution (ANDI)
d. Miscellaneous lesion
e. Traumatic

The result of the cytological diagnosis was compared with those of clinical diagnosis and histopathological diagnosis.

Treatment

a. Medical Treatment - to patients with pain
b. Surgical treatment - excision of the mass when required

Follow-up

Every patient received three months to a year of follow-up care, at which time any malignant conversion or recurrences were observed.

Observations and results

The current study is based on observations made of 60 premenopausal women who were hospitalized to the MGM, Mumbai, surgical department and had benign breast tumors. The study only includes cases that, upon clinical evaluation and investigation, appeared to be benign.

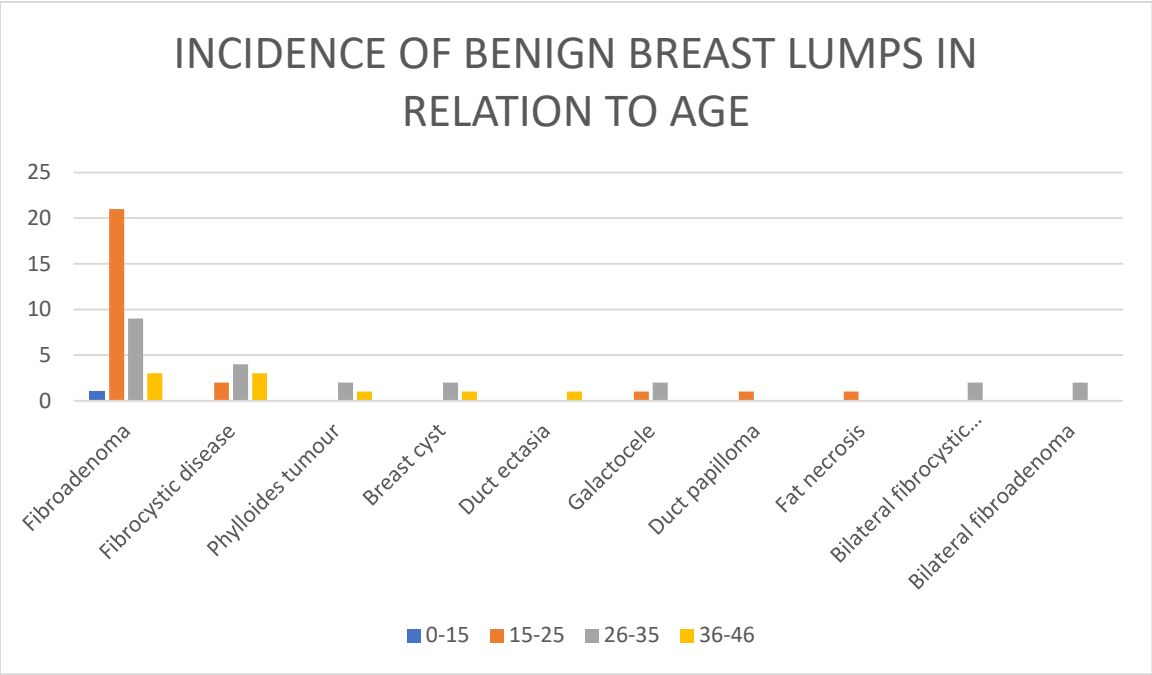
The subsequent information was acquired:

Table 1 shows incidence as it relates to age.

The age range of 15 to 25 years old accounted for the greatest number of benign breast lump cases (27 out of 60 = 43.3%), followed by 36 to 45 years (13.3%), and there was only one case (1.7%) presenting below the age of 15.

Table 1: Incidence of benign breast lumps in relation to age

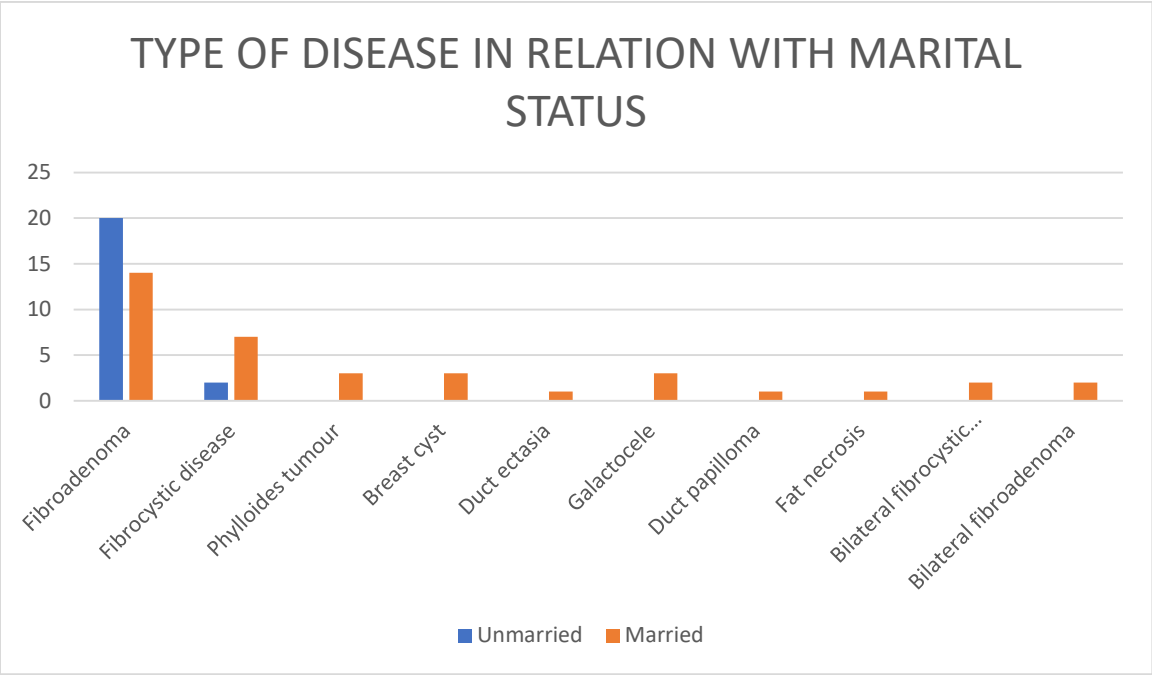
Type of disease	Age			
	0-15	15-25	26-35	36-45
Fibroadeno ma	1	21	9	3
Fibrocystic disease	X	2	4	3
Phylloides tumour	X	X	2	1
Breast cyst	X	X	2	1
Duct ectasia	X	X	X	1
Galactocele	X	1	2	X
Duct papilloma	X	1	X	X
Fat necrosis	X	1	X	X
Bilateral fibrocystic disease	X	X	2	X
Bilateral fibroadenoma	X	X	2	X
Total	1	27	23	9
%	1.7%	45%	38.3%	10.5%



The majority of benign breast lumps (61.6%), which are frequent in married women, are caused by fibroadenoma, fibrocystic disorders, phylloides tumors, breast cysts, duct ectasia, and duct papillomas. Nonetheless, single women had a higher prevalence of fibroadenoma (66.7%).

Table 2: relation with marital status

Type of disease	Marial status	
	Unmarried	**Married**
Fibroadenoma	20	14
Fibrocystic disease	2	7
Phylloides tumour	X	3
Breast cyst	X	3
Duct ectasia	X	1
Galactocele	X	3
Duct papilloma	X	1
Fat necrosis	X	1
Bilateral fibrocystic disease	X	2
Bilateral fibroadenoma	X	2
Total	23	37
%	38.3%	61.6%



The prevalence of benign lumps in single women was determined to be only 38.3% of the total, primarily made up of fibrocystic disease and fibroadenoma.

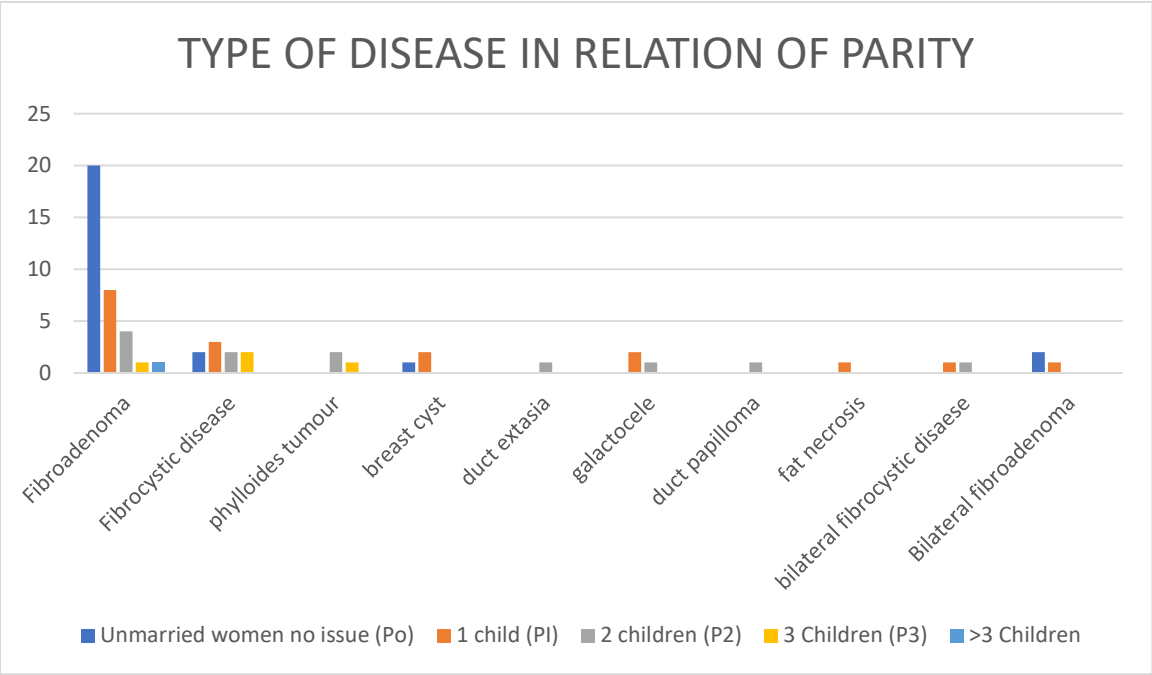
Fig 1: relation of breast lump with marital status (FA - Fibroadenoma, FC- Fibrocystic disease, PT _ Phylloides tumour, BC- Breast cyst, DE- Duct ectasia, GL - Galactocele, DP- Duct papilloma, FN- Fat necrosis, BFA - Bilateral fibroadenoma, BFC - Bilateral fibrocystic disease.)

Table 3 shows the occurrence of benign breast lumps according to parity.

It was shown that women who were parous had a higher frequency of benign breast tumors. Nulliparous individuals, which includes single women, accounted for 41.7% of all benign breast masses. 58.4% of married women's benign breast tumors were parous. One kid (PI) accounted for 30% of benign breast tumors among parous mothers.

Table 3: relation of parity

type of disease	**Parity**				
	Unmarried women no issue (Po)	**1 child (PI)**	**2 children (P2)**	**3 Children (P3)**	**>3 Children**
Fibroadenoma	20	8	4	1	1
Fibrocystic disease	2	3	2	2	X
phylloides tumour	X	X	2.	1	X
breast cyst	1	2	X	X	X
Duct ectasia	X	X	1	X .4 1	X
Galactocele	X	2	1	X	X
Duct papilloma	X	X	1	X	X
Fat necrosis	X	1	X	X	X
Bilateral fibrocystic disease	X	1	1	X	X
Bilateral fibroadenoma	2	1	X	X	X
Total	25	18	12	4	1
%	41.7%	30 %	20%	6.7%	1.7%



(FA - Fibroadenoma, FC- Fibrocystic disease, PT - Phylloides tumour, BC- Breast cyst, DE- Duct ectasia, GL - Galactocele, DP- Duct papilloma, FN- Fat necrosis, BFA - Bilateral fibroadenoma, BFC - Bilateral fibrocystic disease.)

Incidence of benign breast lump in relation to socio¬economic status

All the patients with benign breast lumps were divided into three income groups in Maharashtra.

A) Below average income group- <40,000 Rupees/month

B) Average income group- 40,000 to 1,00,000 Rupees/month

C) Above average income group- >1,00,000 Rupees/month

51.6% of the patients were in the group with incomes below average. Only 16.6% of patients belonged to the high income category, compared to 31.7% of patients in the average income group.

Table 4: relation of socio-economic status

Type of disease	Below average income (rs<40000/m)	Average income (rs 40000- 1,00,000/m)	Above average income (rs> 1,00,000/ m)
Fibroadeno ma	18	10	6
Fibrocystic disease	4	2	3
Phylloides tumour	2	1	X
Breast cyst	2	1	X
Duct ectasia	1	1	X
Galactocele	X	X	1
Duct papilloma	1	2	X
Fat necrosis	X	1	X
Bilateral Fibrocystic disease	1	1	X
Bilateral fibroadeno ma	2	1	X
Total	31	19	10
%	51.6%	31.7%	16.6%

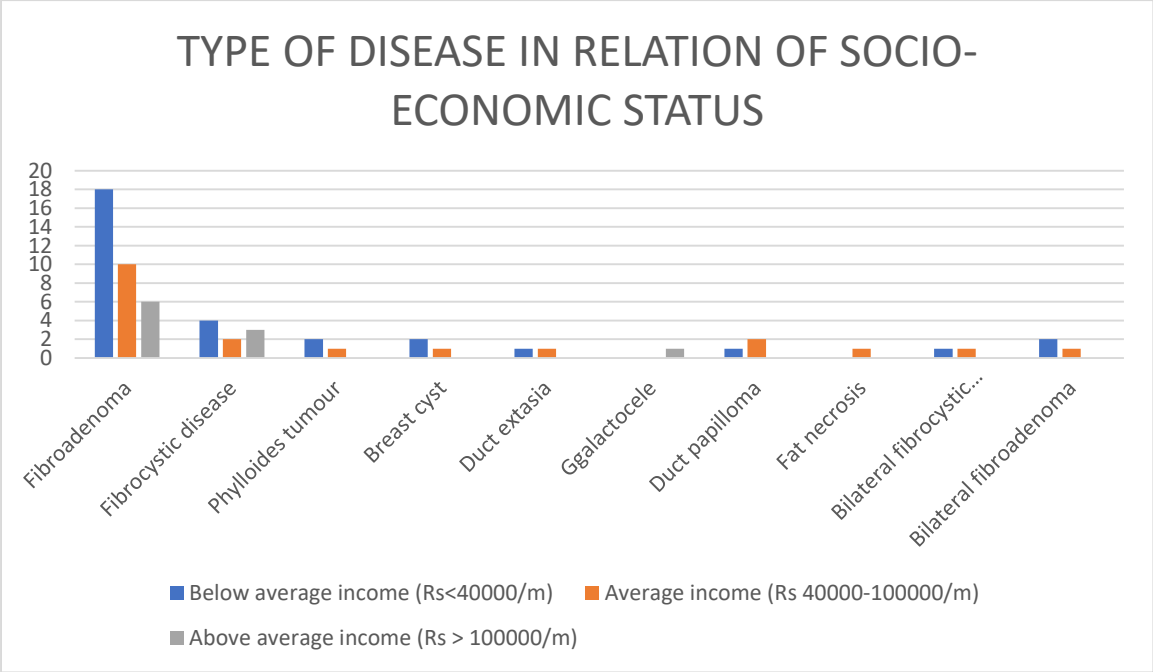


Fig 4: different types of presentations

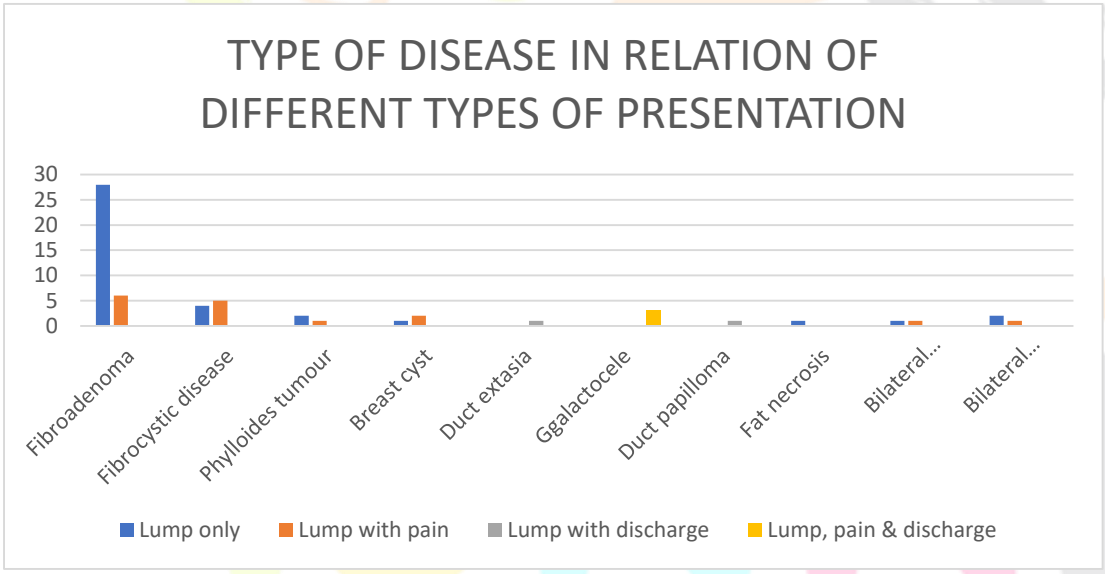
(FA - Fibroadenoma, FC- Fibrocystic disease, PT - Phylloides tumour, BC- Breast cyst, DE- Duct ectasia, GL - Galactocele, DP- Duct papilloma, FN- Fat necrosis, BFA - Bilateral fibroadenoma, BFC - Bilateral fibrocystic disease.)

Variation in the presentation type in connection to the several benign tumors shown in table -5

In 82.3% of cases of fibroadenoma, a lump was the only symptom; in 19.7%, there was also pain. The majority of benign breast lumps—65%—presented as a lump alone, 226.7% as a lump and pain, and just 5% as a lump, discomfort, and discharge combined.

Table 5: different types of presentation

Type of disease	Lump only	Lump with pain	Lump with discharge	Lump, pain & discharge
Fibroadenoma	28	6	0	0
Fibrocystic Disease	***4***	5	0	**0**
Phylloides	2	1	0	0
Tumor				
Breast cyst	1	2	0	0
Duct ectasia	0	0	1	0
Galactocele	0	0	0	3
Duct \ papilloma	0	0	1	0
Fat necrosis	1	0	0	0
Bilateral Fibrocystic Disease	1	1	0	0
Bilateral Fibroadenoma	2	1	0	0
Total	39	16	2	3
%	65%	26.7%	3.3%	5%



(FA - Fibroadenoma, FC- Fibrocystic disease, PT - Phylloides tumour, BC- Breast cyst, DE- Duct ectasia, GL - Galactocele, DP- Duct papilloma, FN- Fat neprosis, BFA - Bilateral fibroadenoma, BFC - Bilateral fibrocystic disease.)

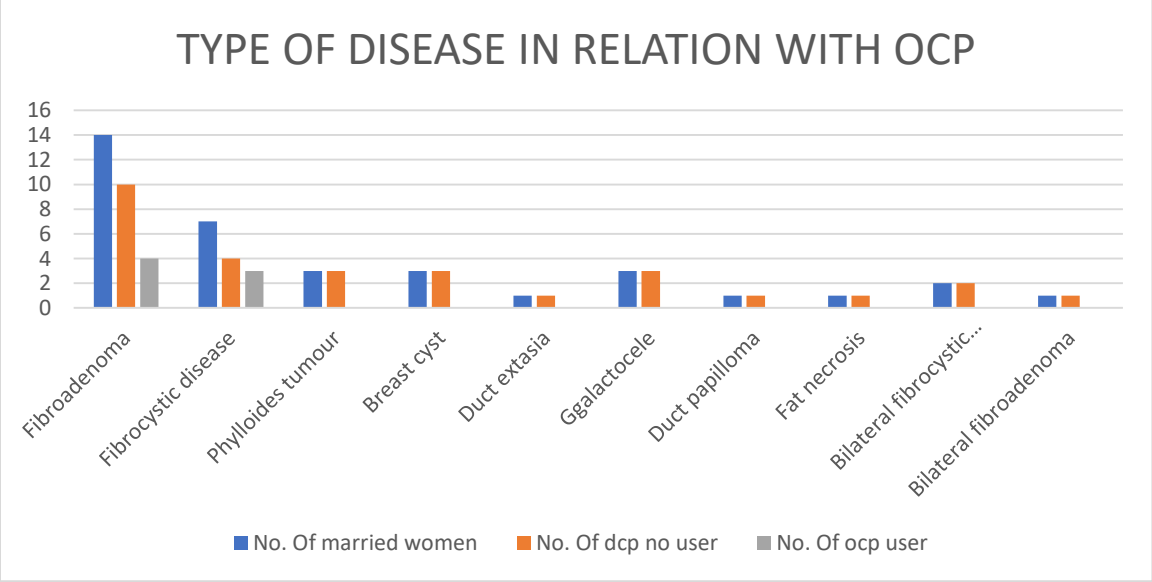
(L - LUMP, P - PAIN, D- DISCHARGE)

Relation of benign breast lumps with use of ocp is depicted n table -6

Of the 36 married women in all, 80.5% had benign breast lumps and did not take oral contraceptives, whereas only 19.25% had benign breast lumps and did take oral contraceptives. Of the 36 married women in our study, 29 (80.5%) did not use OCP, and 19% did. Therefore, among the women who were not using OCP, benign breast lumps were more common.

Table 6: relation with OCP

Type of disease	No. Of married women	No. Of dcp no user	No. Of ocp user
Fibroadenoma	14	10	4
Fibrocystic Disease	7	4	3
Phylloides Tumour	3	3	0
Breast cyst	3	3	0
Duct ectasia	1	1	0
Galactocele	3	3	0
Duct papilloma	1	1	0
Fat necrosis	1	1	0
Bilateral Fibrocystic Disease	2	2	0
Bilateral Fibroadenoma	1	1	0
Total	36	29	7
%	60	80.5	19.25



(FA - Fibroadenoma, FC- Fibrocystic disease, PT - Phylloides tumour, BC- Breast cyst, DE- Duct ectasia, GL - Galactocele, DP- Duct papilloma, FN- Fat necrosis, BFA - Bilateral fibroadenoma, BFC - Bilateral fibrocystic disease.) (OCP NU - OCP NON-USER)

Table 7 shows the relationship between menstruation and benign breast masses.

It was discovered that 31.6% of patients with breast lumps experienced pain flare-ups during their periods, whereas the remaining patients experienced no pain at all.

Table 7: relation with menstruation

Type of disease	Total no of cases	Increased pain during menstruation	No change during menstruation
Fibroadenoma	34	10	24
Fibrocystic Disease	9	5	4
Phylloides Tumour	3	1	2
Breast cyst	3	1	2
Duct ectasia	1	0	1
Galactocele	3	0	3
Duct papilloma	1	0	1
Fat necrosis	1	0	1
Bilateral Fibrocystic Disease	2	2	0
Bilateral Fibroadenoma	3	0	3
Total	60	19	41
%		31.6%	68.3%

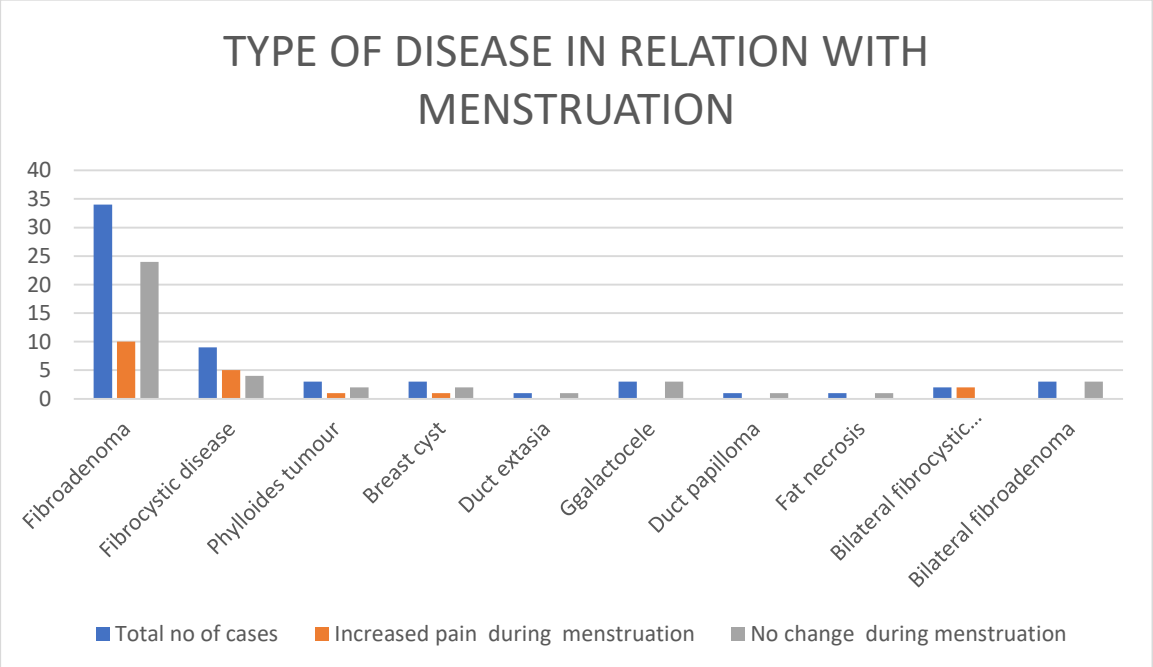
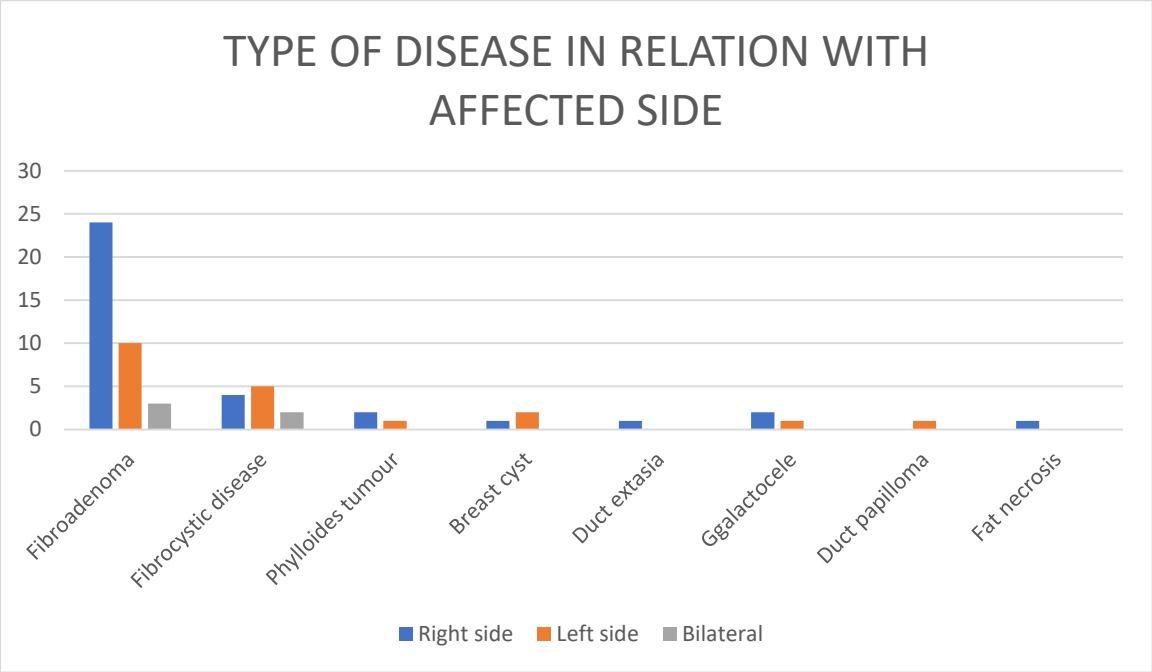
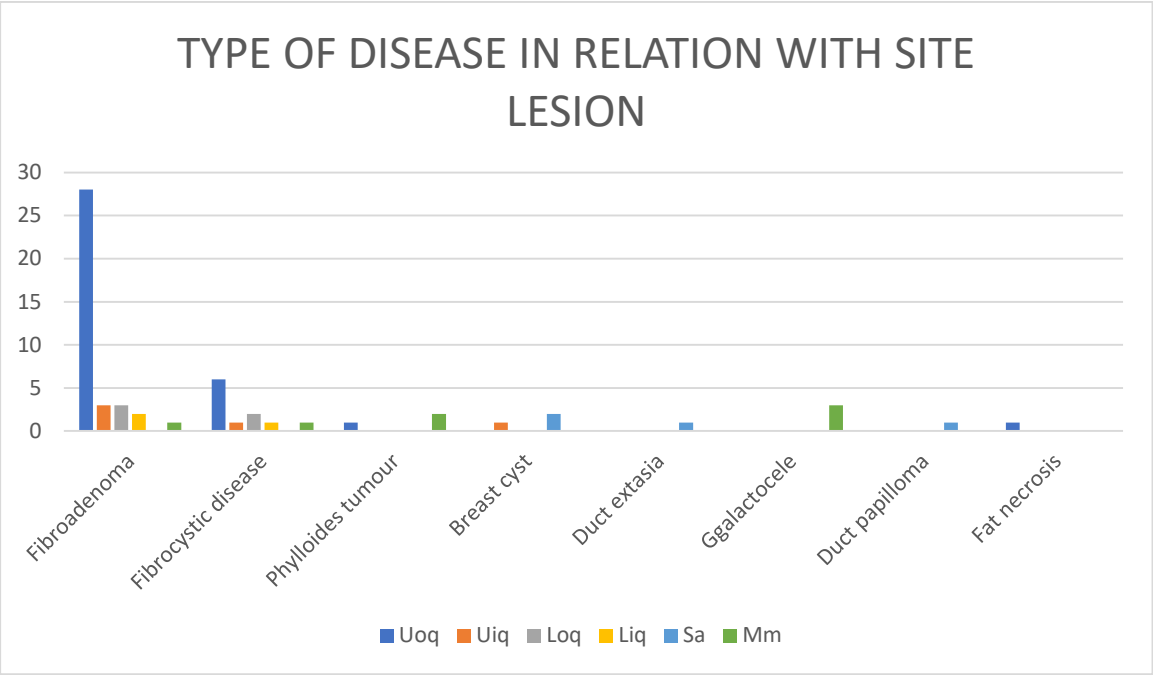


Table 8: relation between site affected & site of distribution of lesion with nature of lesion

Type of disease	Breast affected			Site of lesion					
	Rt. Only	Lt only	Bilateral	Uoq	Uiq	Loq	Liq	Sa	Mm
Fibroadenoma	24	10	3	28	3	3	2	X	1
Fibrocystic disease	4	5	2	6	1	2	1	X	1
Phylloides tumour	2	1	X	1	X	X	X	X	2
Breast cyst	1	2	X	X	1	X	X	2	X
Duct ectasia	1	X	X	X	X	X	X	1	X
Galactocele	2	1	X	X	X	X	X	X	3
Duct papilloma	X	1	X	X	X	X	X	1	X
Fat necrosis	1	X	X	1	X	X	X	X	X
Total	35	20	5	35	5	5	3	4	7
%	58.34	33.3	8.88	58.34	8.33	8.33	5	6.7	11.6
%	58.34	33.3	8.88	58.34	8.33	8.33	5	6.7	11.6





UOQ = Upper outer quadrant, UIQ = Upper inner quadrant, LOQ =Lower outer quadrant, LIQ = Lower inner quadrant, SA = Sub areolar, MM = Multiple lump or involving more than one quadrants.)

(FA - Fibroadenoma, FC- Fibrocystic disease, PT

Fig 7

Fig 7b

FA - Fibroadenoma, FC- Fibrocystic disease, PT - Phylloides tumour, BC- Breast cyst, DE- Duct ectasia, \ GL - Galactocele, DP- Duct papilloma, FN- Fat \ necrosis, BFA - Bilateral fibroadenoma, BFC - Bilateral \ fibrocystic disease.)

Table 8 shows the relationship between the affected breast and the lesion's site of dissemination and kind.

The right side of the breast was more affected (58.34%) than the left (33.3%) in our research of benign breast lumps. 8.33% of cases had bilateral breast affection. The upper outer quadrant of the breast was more frequently impacted than the other three (58.3%).

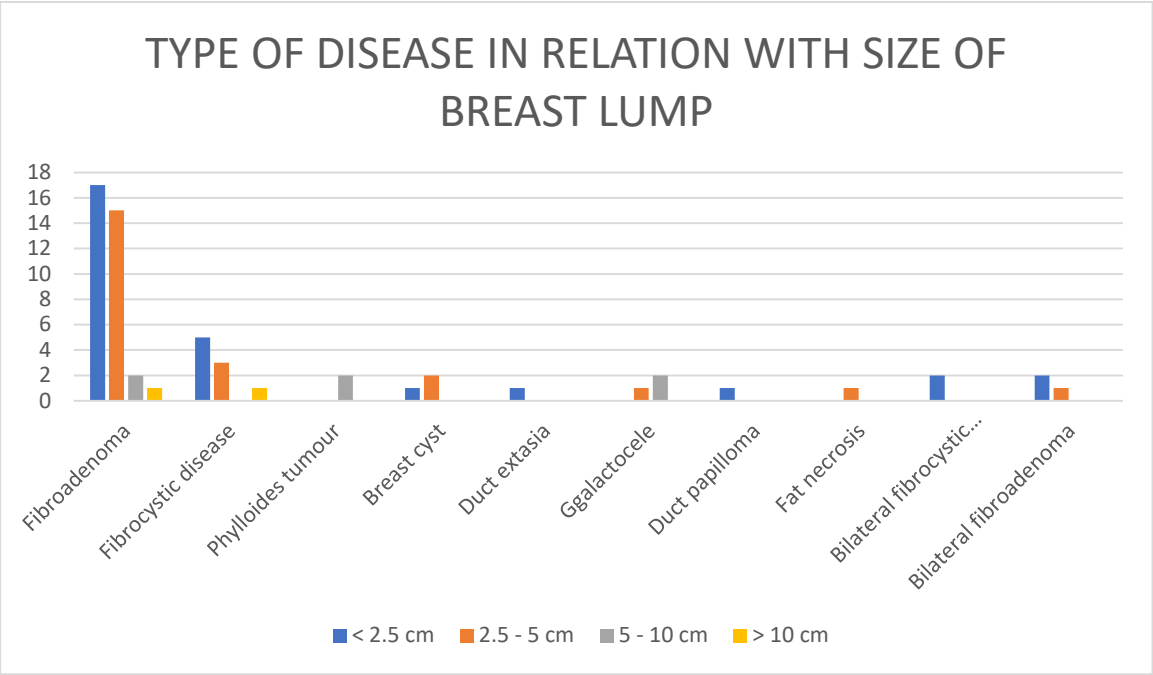
(FA - Fibroadenoma, FC- Fibrocystic disease, PT - Phylloides tumour, BC- Breast cyst, DE- Duct ectasia, GL - Galactocele, DP- Duct papilloma, FN- Fat necrosis, BFA - Bilateral fibroadenoma, BFC - Bilateral fibrocystic disease.)

(UOQ = Upper outer quadrant, UIQ = Upper inner quadrant, LOQ =Lower outer quadrant, LIQ = Lower inner quadrant, SA = Sub areolar, MM = Multiple lumps or involving more than one quadrant.)

The relationship between incidence and lump size is shown in table 9.

Of the sixty benign breast lump cases, twenty-nine (48.38%) had a size of less than 2.5 cm, while twenty-three (383.3%) had a size of between 2/5 and 5 cm.

Type of disease	Size of breast lump			
	<2.5 CM	2.5-5 CM	5-10 CM	>10 CM
Fibroadenoma	17	15	02	01
Fibrocystic Disease	5	03	X	01
Phylloides T umour	X	X	02	X
Breast cyst	01	02	X	X
Duct ectasia	01	X	X	X
Galactocele	X	01	02	X
Duct papilloma	01	X	X	X
Fat necrosis	X	01	X	X
Bilateral Fibrocystic Disease	02	X	X	X
Bilateral Fibroadenoma	02	01	X	X
Total	29	23	6	02
%	48.33	38.3	10	3.3



(FA - Fibroadenoma, FC- Fibrocystic disease, Ply Phylloides tumour, BC- Breast cyst, DE- Duct ectasia) GL - Galactocele, DP- Duct papilloma, FN- Fat necrosis, BFA - Bilateral fibroadenoma, BFC - Bilateral fibrocystic disease.)

Size of lump in relation to duration of symptoms depicted in table -10

The chart clearly indicates that, in our study of benign breast lumps, the size of the lump is correlated with the length of symptoms. According to the table, 14 cases of fibroadenoma that appeared later, between 6 and 12 months, had more than 5 to 10 CMS in size, and 20 cases of fibroadenoma that appeared within 6 months had less than 5 cm in size. The patient stated that the rate of growth was really poor. Nevertheless, because the patients underwent surgery following the lump's manifestation, we were unable to compare the growth rate. This study has also determined that benign breast lumps are tumors with very slow growth.

Table 10: relation to duration

Duration —	<6 Months		6 - 12 Months		>12 Months	
Size (CMS) disease	<5	5 - 10	<5	5 - 10	<5	5 - 10
Fibroadenoma	20	X	X	14	X	X
Fibrocystic Disease	03	X	X	05	01	X
Phylloides Tumour	X	01	X	01	X	01
Breast cyst	.X	X	01	X	02	X
Duct ectasia	X	X	01	X	02	X
Galactocele	02	01	X	X	X	X
Duct papii'oma	01	X	X	X	X	X
Fat'.iecrosis	X	X	01	X	X	X
Bilateral Fibrocystic Disease	X	X	02	X	01	X

(FA Fibroadenoma, FC- Fibrocystic disease, PT — Phylloides tumour, BC- Breast cyst, DE- Duct ectasia, GL - Galactocele, DP- Duct papilloma, FN- Fat necrosis, BFA - Bilateral fibroadenoma, BFC - Bilateral Fibrocystic disease.)

Fig 9: C size of lump in > 12 months duration

(FA — Fibroadenoma, FC- Fibrocystic disease, PT Phylloides tumour, BC- Breast cyst, DE- Duct ectasia, GL - Galactocele, DP- Duct papilloma, FN- Fat necrosis, BFA - Bilateral fibroadenoma, BFC - Bilateral fibrocystic disease.)

Fig 9: B size of lump n 6-12 months duration

Correlation between fnac diagnosis and histo pathological diagnosis is depicted in table-11

When comparing the final histopathological diagnosis with FNAC, the accuracy for diagnosing fibroadenoma was found to be 97.3%, while the accuracy for detecting fibrocystic disease was found to be 90.9%. The diagnosis of duct ectasia, duct papilloma, and phylloides tumor was completed with 100% accuracy.

Table 11: correlation between fnac & histopathological diagnosis

Type of disease	hpe	fnac			
		No. of cases of FNAC	Correct Diagnosis	In-Uorrect Diagnosis	% Of Accuracy
Fibroadenoma	37	37	36	1	97.3
Fibrocystic disease	11	11	10	1	90.9
Phylloides tumour	3	3	3	X	100
Breast cyst	3	3	3	X	100
Duct ectasia	1	1	1	X	100
Galactocele	X	3	3	X	100
Duct papilloma	1	1	1	X	100
Fat necrosis	1	1	1	X	100
Total	57	60	58	2	

Of the 60 patients, 5 cases (06.49%) had skin abnormalities that were identified as phylloides tumors. Retraction of the lips observed in 5 cases (06.49%). In 04 cases (0.19%), the cause was a phylloides tumor; in 01 cases (1.29%), the reason was duct ectasia.

There are five occurrences of breast augmentation, all of which involve phylloides tumors.

Exams Analysis of the FNAC

The accuracy of FNAC in detecting fibroadenoma was found to be 97.3%, while the accuracy in diagnosing fibrocystic disease was found to be 90.9% when compared to the final histological diagnosis. Diagnosing phylloides tumor, breast cyst, duct ectasia, duct papilloma, gynecomastia, and galactocele was found to be 100% accurate. Ultrasonography interpretation 92.89% of breast masses detected by breast sonography were correctly diagnosed as fibroadenomas. When it comes to the histopathological (final) diagnosis made in the diagnosis of fibrocystic disease, it is 63.63% correct. There was 100% accuracy in the diagnosis of breast cysts. Interpreting radiography images Out of 60 cases, 12 cases were investigated; 3 cases had phylloides tumors, 3 cases had fibroadenomas, and 5 cases had fibrocystic disease. Nevertheless, the results for this particular case showed that the phylloides tumor was correctly diagnosed in 66.6% of cases. However, the diagnosis accuracy for fibrocystic disease was 66.66% and fibroadenoma was 88.3%. The accuracy rate as a whole was 75%.

Management procedure applied

The majority of the time, patients received treatment consisting of a biopsy after the lesion was surgically removed (lumpectomy).

In all cases of fibroadenoma, excision along with a biopsy served as the only therapeutic option.

Primrose oil is used as an analgesic and a comfort measure in the treatment of fibrocystic illness. Danazol was further required in 40% of instances. Six patients received treatment consisting of lump removal and tissue biopsy. Whether fibrocystic disease is treated surgically or conservatively, a biopsy and histological examination are performed in every instance.

All cases of Phylloides tumors involved a simple mastectomy, with the exception of one when a lumpectomy was performed. After the patient experienced a recurrence six months following the lumpectomy, a straightforward mastectomy was performed.

Both the primary duct excision and the microdochectomy in duct papilloma have been completed. The lump is excised when there is fat necrosis.

Aspiration of contents was performed on a breast cyst. One patient had an excision biopsy because the breast cyst did not go away following aspiration and the aspirate was tinged with blood.

Aspiration of the contents was completed in Galactocele; follow-up was done on time.

Following surgery, fibroadenoma, duct ectasia, and duct papilloma showed favorable outcomes. In these cases, there was no recurrence over the follow-up period.

Talk

60 We included patients with benign breast lumps who were in the premenopausal age group in our study, and we analyzed the data.

Association with age

A maximum number of benign breast lumps were observed in the 15–25 age range. Fibroadenoma was the most frequently discovered benign breast lump in individuals between the ages of 15 and 25. These results were consistent with Sandison's earlier research (1955). According to stewards, fibroadenoma is the most common benign breast lump in women aged 20 to 35. According to Sandison (1958), the age range of 21 to 25 is when fibroadenoma incidence is highest. Therefore, the aforementioned finding by Stewards, Sandison, and Evans is in line with what we found regarding the occurrence in relation to age. The age range of 26 to 35 years old was the most common for fibrocystic disease in the current study. This is consistent with Haagen Sen's (1956) finding that the peak age for fibrocystic illness is 35 years old. The woman in our study had dual ectasia and was 45 years old, close to menopause. According to Frantz Mclcher and Auchinclaus (1951), ectasia is more common in postmenopausal women, which is consistent with our observations. In the current investigation, a 26-year-old patient and a 33-year-old patient were revealed to have phylloides tumors. According to Stephenson CL, the incidence of a 1952 tumor peaks in the third decade. Our observation, then, is consistent with this reference. Bilateral fibroadenoma in our study is 2.7%, almost matching the findings of investigations by AK Sangrasai (2007 World J of Med. Sci.) and Aisha Memon Shahida Parveen[10], which found 3.7% of bilateral instances.

Connection to marital status

Sixty percent of the patients in our study were married. This statistic is a little high, which could be explained by the prevalence of early marriage in our nation. In single women, fibroadenoma was common (59.45%), whereas in married women, fibrocystic disease was common. While the later observations did not

agree with most sources, the former observation does, and this is explained by the fact that early versus late marriage is common in our nation. Additionally, single women's shyness keeps them from making an early presentation. Homesh et al. (2008) found that 69.3% of 296 patients with benign breast lumps were married. They also provided a similar explanation for why young, single women in underdeveloped nations are reluctant to visit the outpatient department.

Benign breast masses predominated in our investigation. Nuliiparous people, which includes single people, made up 41.7% of all benign breast lumps. One child made up 30% of all benign breast lumps among parous women. Our findings was consistent with Bright et al.'s (1989) finding that parity was protective against benign breast illnesses.

Connection to OCP

In our study, 57.14% of individuals with fibrocystic illness did not use oral contraceptive pills, compared to 42.8% who did. This is in line with the findings of Bright RA et al. (1989), who found that exogenous oestrogen and OCP therapy are highly protective against benign breast lumps. According to Vessey & Yates et al. (2007), using the new formulation of OCP for longer periods of time considerably lowers the incidence of fibroadenoma and fibrocystic illness.

Relation to the lesion's side and location The majority of the lesions in our analysis were on the right breast. 58.34% and 8.33% of the breasts were impacted. Because the upper outer quadrant of the breast contains the greatest amount of glandular tissue, it was discovered that this region had the highest frequency of lesions (58.3%). It is in line with the results of Hussain et al. (2005), who reported that in his series, 58% of patients had a palpable lump in the upper and outer quadrant, 29% in the upper pinner quadrant, and 8% in the lower and outer quadrant. Additionally, our research aligns with the results of a recent study conducted at the Somaiya Medical College 8c Research Center (2009).

Exams

Histopathologic analysis

It served as the gold standard by which the investigation's correctness was measured. It was assumed to be the last, definitive diagnosis. Of all the breast lumps that were investigated, fibroadenoma accounted for 61.6% of them, fibrocystic disease for 18.33%, and breast cysts for 5%. In 5% of instances, a phylloides tumor was diagnosed. 1.66% have duct papilloma. According to Me, Donald & Harrington (1950), 90% of phylloides tumors are benign and 10% are malignant. Every phylloides tumor case in the current investigation was benign. According to Tiwari et al. (2007), fibroadenoma was likewise shown to be the most frequent pathology (39.6%). Other conditions included duct ectasia, galactocele, fibrocystic disease, and breast abscess, which ranged from 5.7% to 7.7%.

Cytology using fine-needle aspiration

In the current investigation, the FNAC has a 98.5% diagnostic accuracy for benign breast lumps, a 97.3% accuracy for fibroadenoma, and a 90.9% accuracy for fibrocystic illness. For phylloides tumor breast cysts, duct ectasia galactocele duct papillomas, and fat necrosis, 100% accuracy was achieved. Thus, our research is in line with Ackerman's (1958) findings, which showed that specificity was about 100% and average

sensitivity was approximately 87%. A comparable study conducted at Liquate Medical College in Hyderabad revealed 96.4% specificity, 96.5% sensitivity, and 96% diagnostic accuracy.

Mammography via radiography

The approach proved to be quite beneficial in our current study. 85.33% of fibroadenoma cases, 66.6% of fibrocystic disease cases, and 66.6% of phylloides tumor cases were correctly diagnosed. The accuracy percentage overall was 25%. Hassler (Terson Chohan) reported that radio-mammography accuracy was 90%, which is nearly in line with an o/v research involving a small patient population.

Sonography

In our study, ultrasonography was shown to be 90.9% accurate in detecting fibroadenoma and 66.6% accurate in diagnosing fibrocystic illness. A breast cyst might be diagnosed with 100% accuracy.

Supervisory

Patients were provided both surgical treatment with excisional biopsy and conservative treatment with assured medication therapy with analgesics and Danazol. In the study, surgical excision and biopsy were used to treat 65% of all patients. In all of the instances in our collection involving fibroadenoma, excision was followed by biopsy. Nonetheless, certain writers support conservative care for women under thirty. Aside from a biopsy, no surgical treatments were performed in patients with fibrocystic illness since they were classified as being on the highveld, Mansel, RE spectrum; instead, only medical care with assurance and analgesics were administered. Danazol was added in 50% of fibrocystic illness cases.A microdochectomy was performed for duct ectasia, and the primary duct was excised for duct papilloma. A biopsy was done for excision of fat necrosis. A straightforward mastectomy was performed for the phylloides tumor.

Subsequent investigations CV

Given that the benign lesion progresses relatively slowly and the study period lasted just one year, it is challenging to get a definitive conclusion. Long-term follow-up is necessary to demonstrate any recurrence. Following surgery for fibroadenoma, abscess, duct ectasia, and duct papilloma, the results were excellent, and no recurrence was discovered throughout the follow-up period. Despite medication and encouragement, fibrocystic illness returned. After the sixth month, the recurrence rate was 16.%. In conclusion, the majority of benign breast lesions respond pretty well to surgery, with the exception of the recurrence of mastalgia in fibrocystic illness.

Conclusion

This study comprised 60 premenopausal individuals with benign breast tumors who were referred to MGM Medical College and Hospital in Navi Mumbai. The majority of patients had histological analysis, FNAC, and breast sonography as part of their clinical assessment. The following are the conclusions:

- The 15–25 year age range had the highest number of benign breast lump cases. Ages 15 to 25 were shown to be the most common age group for fibroadenoma. The eldest was forty-four years old, while the youngest was thirteen.
- People between the ages of 26 and 35 were found to have fibrocystic illnesses more frequently.

- A slightly higher percentage of patients—60%—were married. It was shown that while fibroadenomas were more common in single women, fibrocystic disorders were more common in married women.
- In most cases of fibroadenomas, lumps were the main complaint, but in fibrocystic disorders, lumps with discomfort were the most common complaint. 3.33% of patients had nipple discharge when they first arrived.
- The lump's size corresponded with how long the symptoms had been present.
- Benign breast lumps are tumors that grow very slowly.
- Preponderance Of the patients, 41.7% were single.
- It was discovered that menstrual discomfort was exaggerated in 27.2% of fibroadenoma cases. The percentage for fibrocystic disorders was almost 55.5%.
- Of the patients with fibrocystic disorders in this study, 42.8% took oral contraceptives. The percentage of patients with fibroadenoma who used oral contraceptives was 2.85%, indicating a low incidence of oral contraceptive pill use in this condition. Of the patients, 58.34% had a lump in their right breast, and 58.3% had it in their upper quadrant of the breast.
- When comparing other metrics, histological examination was the gold standard, offering 100% accuracy.
- The FNAC reported an overall diagnosis accuracy rate of 90.9% for fibrocystic disease and 97.3% for fibroadenoma. precision attained in the diagnosis of breast cysts, phylloides tumors, duct papillomas, and duct ectasia.
- The diagnostic accuracy of radio mammography for fibroadenoma was 88.83%, while for fibrocystic disorders it was 66.6%. In Phylloides tumors, the accuracy was 66.65%.
- The diagnostic accuracy of breast sonography was 66.6% for fibrocystic disease and 90.9% for fibroadenoma. A breast cyst was diagnosed with 100% accuracy.
- Danazol, analgesic medications, surgical excision, and assurance were the forms of conservative treatment administered to fifteen patients with fibrocystic illnesses.
- In 100% of fibroadenoma instances, excision is performed.
- The prognosis for surgery in benign breast disorders is fairly good, with the exception of mastalgia persistence in fibrocystic diseases.
- A longer follow-up time might have accurately captured the date that was left out of this series because of the shorter follow-up duration.

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