

## Original Research Article

**A prospective study of histopathological spectrum of benign breast lesions in a tertiary hospital****Karattupalayam Sampath Mouleeswaran<sup>1</sup>, B.S.Sangeetha<sup>2\*</sup>**<sup>1</sup>*Assistant Professor, Department of Pathology, Tagore Medical College and Hospital, Chennai, Tamil Nadu, India*<sup>2</sup>*Assistant Professor, Department of Pathology, Tagore Medical College and Hospital, Chennai, Tamil Nadu, India***Received: 30-11-2021 / Revised: 28-12-2021 / Accepted: 01-01-2022****Abstract**

**Introduction:** In India, the second most common malignancy after cervical carcinoma is carcinoma breast and is seen in 20/1,00,000 women[1]. Lesions of the breast are diverse including several entities with remarkably diverse characteristic feature extending from inflammatory non-neoplastic and benign lesions to life threatening invasive carcinomas. **Materials and Methods:** The present study was conducted in the department of Pathology, Tagore Medical College and Hospital, Chennai, India over a period of 1 year February 2020 to January 2021. Total 220 benign breast lesion were studied during the period. Core needle biopsy, excision biopsy, lumpectomy, modified radical mastectomy specimens were examined. Sections were processed, embedded for paraffin sectioning, stained with hematoxylin and eosin stain and detailed microscopic examination was done. The demographic characteristics of patients were presented in excel sheet and analyzed for the frequency of each lesion and their distribution in various age group. **Results:** This included 215 females and 05 males. Out of these 220 breast lesions, 40 were malignant cases and 180 were benign breast lesions. These 180 benign breast lesions including inflammatory lesions, benign proliferative lesions and benign tumors (Table1). Out of 220 cases, 215 were females and 05 were males. **Conclusion:** Benign breast lesions are common than malignant neoplasms. Fibro adenoma is the commonest benign breast lesion. Our study had given the information which was comparable with other studies. Histopathological study of breast lesions play very important role in diagnosis of lesion and hence in treatment and prognosis.

**Key Words:** Cervical carcinoma, Fibro adenoma, benign tumors.

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**Introduction**

In India, the second most common malignancy after cervical carcinoma is carcinoma breast and is seen in 20/1,00,000 women[1]. Lesions of the breast are diverse including several entities with remarkably diverse characteristic feature extending from inflammatory non-neoplastic and benign lesions to life threatening invasive carcinomas[2].

World-wide breast lesions have become a major cause of mortality among women.5 Most of the breast lesions usually present as a lump or swelling in the breast which is a very sensitive matter for female patients because of which timely reporting to the doctor for an examination won't happen. Neoplasms of the breast are diversified. Malignant breast lesions are less common than benign tumours[3].

Benign lesions of the breast usually present in the second decade of life. Common benign lesions of the breast include fibro adenoma, phyllodes tumour, lactating adenoma and tubular adenoma. Benign proliferative lesions include fibrocystic disease, inflammatory lesions such as breast abscess, and granulomatous mastitis. Malignant lesions are ductal carcinoma, lobular carcinoma, colloid carcinoma, mucinous carcinoma and medullary carcinoma[4,5].

The main objective of study is to study histopathological presenting in tertiary care centre, frequency of individual benign breast disease and distribution of BBD with age & sex.

**Materials and methods**

The present study was conducted in the department of pathology, Tagore Medical College and Hospital, Chennai, India over a period of 1 year February 2020 to January 2021.

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**Inclusion Criteria**

- Nonmalignant/benign breast were included in the study.
- Both male and female patients with benign breast lesion were included.
- Inflammatory lesions were also included.

**Exclusion Criteria**

- Patient with proven malignant disease and inadequate biopsies were excluded from present study.

**Results**

The total number of breast specimens received at histopathology section of the Department of Pathology was 220 from February 2020 to January 2021. This included 215 females and 05 males. Out of these 220 breast lesions, 40 were malignant cases and 180 were benign breast lesions. These 180 benign breast lesions including inflammatory lesions, benign proliferative lesions and benign tumors (Table1). Out of 220 cases, 215 were females and 05 were males.

**Table 1: Gender Distribution**

S.No	Gender	N (%)
1	Male	5(2%)
2	Female	215(98%)

**Table 2: Total breast lesions**

S.No	Breast lesions	N (%)
1	Benign	180(82%)
2	Malignant	40(18%)

**Table 3: Age distribution**

S.No	Age distribution	N (%)
1	11-20	(20.74%)
2	21-30	(41.44%)
3	31-40	(19.81%)
4	41-50	(12.61%)
5	51-60	(2.70%)
6	61-70	(0.90%)
7	71-80	(1.80%)
8	Total	220 (100%)

**Table 4: Distribution pattern of benign lesions**

S.No	Benign breast lesions	N (%)
1	Fibroadenoma	140 (63.06%)
2	Fibrocystic change	6 (2.70%)
3	Lactating adenoma	6 (2.70%)
4	Accessory breast	6 (2.70%)
5	Gynaecomastia	2 (1.80%)
6	Mammary Hamartoma	16 (7.20%)
7	Tubular adenoma	2 (0.90%)
8	Mixed Haemangioma	2 (0.90%)
9	Lipoma	2 (0.90%)
10	Benign Phyllod tumor	6 (2.70%)
11	Duct ectasia	4 (1.80%)
12	Granulomatous mastitis	4 (1.80%)
13	Breast Abscess	7 (3%)
14	Fat Necrosis	2 (0.90%)
15	Other inflammatory lesions	14(6.30%)
16	Total	220

In present study, Fibroadenoma was the commonest i.e. 63.06%, followed by mammary hamartoma 7.20%. Masses of Fibroadenoma ranged from 0.5 cms to 5.5 cms. Majority of them showed slit like areas in the cut surface intracanalicular and pericanalicular pattern were seen microscopically and in some both patterns coexisted in the same tumor. There were 8 cases of hamartoma constituting 7.20%. Microscopically, It was a well circumscribed mass of mammary ducts and lobules containing various amount of fibrous and adipose tissue.

#### Discussion

Breast lesions are detected very commonly now days, due to awareness, Knowledge and most importantly self examination done by patients. Benign breast disease constitutes a heterogeneous group of disorder which is one of the most important cause of breast problem in females and it is more frequent than malignant ones[6]. Incidence of benign breast lesion in the present study was 82% of are the breast lesions. The findings were comparable with the studies done by Hatim et al (80%) and Rasheed et al (80.7%) Bagale et al a study in north Maharashtra noted 78.57% while Pudale et al noted (71.75%)[7]. In our study, about 48% of the patients with BBD were in the age group between 21-30 years. Similar incidence of benign breast disease in the age group of 21-30 is reported by Godwins et al From Nijeria and Hatim et al study[8].

In study by Khanzada et al majority of the patients (82%) were below the age of 40 yrs in agegroup between 21-30 yrs. Other studies from India by Vimal M et al and karki Obetal reported higher incidence of BBD of 50% and 67% respectively in age group of 21-30 yrs.

Sex distribution- benign breast lesions were higher in females 98% similar were the findings in the study of Khanna et al (97.73%) and Haque et al (91.44%). In present study fibroadenomas (63.06%) is the most common benign lesion which are comparable with the studies of Hatim KS et al (77.62%)5, Pudale et al (40%)8, Haque et al (52.88%)14, Oluwale and freeman (48.51%) , Bagale et al (30.8%)7, and kulkarni et al (62.32%) .

In our study fibrocystic disease account for 2.70%, while other study in account for 4.3%, 32%, 22.12%, 11.24% in Hatim KS et al5, Pudale et al, Haque et al and Bagale et al respectively. It was seen

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association with fibroadenoma. It was equally seen in 2rd, 3rd and 4th decade, however kumar et al found fibrocystic disease in agegroup 20-30yrs where as Prajapati et al, Bagale et al7 found most cases in 4th decades. Fat necrosis was seen in single case (0.90%) while it was 0.40%, 2.88%, 2.97% and 2.24% in Hatim K S et al5, Haque et al14, Oluwale and Freeman et al and Bagale et al7 study respectively. Fat necrosis is a benign non suppurative inflammatory process of adipose tissue. It is important to diagnose necrosis because it can often mimic carcinoma of the breast[9]. Eight cases of hamartoma of the breast was reported in our study constituting 7.20% of all the cases. Two cases of hamartoma were reported by Forae et al while Pudale et al8 reported a single case (0.18%) in their study. Breast abscesses were seen in four cases in our study accounting for 5.40% of cases. In India, incidence of breast abscess ranges from 1%, 1.67% to 6.5% as reported by Hatim KS et al5, Pudale et al and Bagale et al respectively. Granulomatous mastitis was seen 2 cases in present study which was accounting for 1.80% of total cases. In other studies of Hatim KS et al, Pudale et al and Bagale et al it was accounted few 2.40%, 2% and 4.90% respectively. In our study mammary hamartoma account for 7.20% while in the study of Gargade CB et al and Aamir et al it was 1.23% and 93% respectively.

In our study we had a case of lipoma, Accessory breast and mixed hemangioma which are found in one case (0.9%), 3 cases (2.70%) and one case (0.9%) respectively. We also found other inflammatory conditions such as acute on chronic nonspecific inflammation, chronic specific lobulitis with interstitial inflammation. These all are found in 7 cases which accounted for 6.30% [10].

#### Conclusion

Our study included 220 cases of breast biopsies which had given us the opportunity to study a variety of lesions which were diagnosed histopathologically. Benign breast lesions are common than malignant neoplasms. Fibroadenoma is the commonest benign breast lesion. Our study had given the information which was comparable with other studies. Histopathological study of breast lesions play very important role in diagnosis of lesion and hence in treatment and prognosis.

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