

## The Frequency of Benign & Malignant Breast Lesions at a Tertiary Care Hospital in Lahore

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### ABSTRACT

**Objective:** To determine the frequency of benign and malignant breast lesions at a tertiary care hospital.

**Materials & methods:** This is a cross sectional, descriptive, prospective study carried out at Nawaz Sharif Social Security University Hospital Lahore. The study duration was 1 year i.e., from January 2010 to January 2011. All the female patients between 16 to 70 years of age who presented with breast lump to surgical outpatient department of Nawaz Sharif Social Security University Hospital Lahore from January 2010 to January 2011 were included in the study. All the patients were interviewed and examined by senior registrar and later on by consultants in outpatient department. All the patients were investigated (ultrasonography, mammography). Fine needle aspiration cytology and biopsies were carried by general surgeons and were reported by consultant pathologist at the same hospital.

**Results:** Total 200 patients were presented with breast lump out of which 160 (80%) were benign and 40(20%) were malignant (according to histopathology). Among the benign lesions 85(42.5%) were fibroadenoma, 50(25%) fibrocystic changes and 25(12.5%) were abscesses. Out of 40 malignant cases 30 (15%) were ductal carcinomas, 8(4%) were lobular carcinomas and 2(1%) were medullary carcinoma.

**Conclusion:** Breast lump is the commonest presentation of the breast cancer in women and is a rapidly growing problem in Pakistan. The incidence of malignancy is higher in women of age more than 30 years. The commonest subtype is the invasive ductal carcinoma. In contrast to certain international studies, Pakistani females present with malignant breast lesions at a younger age. Thus this warrants the need for a national screening programme and regular self examination of breast by females in Pakistan.

**Key words:** Breast lesion, lump, biopsy

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### INTRODUCTION

In West, breast cancer is one of the most common malignancies in the women and they commonly present to the doctor with the breast lump<sup>1,2,3</sup>.

Breast lumps may occur due to benign or malignant lesions and their management varies according to the presentation of the patient. Benign breast diseases can be classified by two ways. One classification is based on histopathology and other on the basis of clinical presentation as shown in Table 1 & 2<sup>4</sup>.

In USA, certain studies have shown that 60% of patients have benign breast disease while 10% have cancer<sup>5</sup>. Breast cancer is the most common malignant tumor in females in Pakistan<sup>6</sup> as well as in USA<sup>7</sup>. In USA, breast cancer is the second most common cause of death<sup>8</sup>. So it is important to make an early diagnosis of breast cancer so that its

treatment can also be commenced early as it can reduce high mortality due to breast cancer<sup>9,10</sup>. The available literature stresses upon the importance of triple assessment i.e., clinical examination, mammography and fine needle aspiration cytology<sup>11</sup>. Local examination of the breast lump and the age of the patient give us very valuable information about the nature of the lump and to confirm the diagnosis histopathology is necessary. Histopathological diagnosis can be obtained by FNAC (Fine Needle Aspiration Cytology) or by Biopsy (open or by trucut needle). The importance of mass population screening with modern mammography has also been shown in literature<sup>12</sup>.

### MATERIALS & METHODS

This is a cross sectional, descriptive, prospective study carried out at Nawaz Sharif Social Security University Hospital Lahore. The study duration was 1 year i.e. from January 2010 to January 2011. All the

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patients from 16-70 years of age who presented with breast lump to surgical outpatient department of Nawaz Sharif social Security University Hospital Lahore from January 2010 to January 2011 were included in the study. All these patients were thoroughly interviewed and examined. For tissue diagnosis, FNAC, biopsies were carried out. Those breast lesions which required surgical management (as breast abscesses, malignant breast lesion or giant fibroadenoma) were removed surgically by mastectomies etc. All the breast abscesses were drained by incision and drainage. The malignant breast lesions requiring CRT (chemo- radiotherapy) were referred to INMOL hospital. All the patients were followed up to 1 year post operatively. The SPSS version 17 was used for data analysis.

## RESULTS

From January 2010 to January 2011, total 200 female patients were presented with breast lump out of which 160 (80%) were benign and 40 (20%) were malignant (according to histopathology). Fibroadenoma (85 cases, 42.5%) was the commonest cause of breast lump that followed by the fibrocystic disease (50 cases, 25%), malignancy (40 cases, 20%) and lastly breast abscesses (25 cases, 12.5%). Out of 40 malignant cases 30(15%) were ductal carcinomas, 8(4%) were lobular carcinomas and 2(1%) were medullary carcinoma.

Out of these malignant cases, 24(12%) were having stage III disease, 10(5%) having stage IV disease and 6(3%) having stage II disease. These stages are shown in table 3. The mean ages of the patients having these benign and malignant lesions are shown in table 4 and 5.

**Surgical Management:** All the female patients diagnosed with fibrocystic disease were reassured and asked for follow up. All the female patients diagnosed with fibroadenomas had got them surgically removed due to cosmetic reasons and secondly patients had the fear of malignancy. All the breast abscesses were drained. Patients with stage III disease had undergone modified radical mastectomy + axillary dissection followed by CRT. Patients having stage IV disease had debulking surgery+CRT. Patients having stage II disease had simple mastectomy± axillary dissection.

Table 1: Pathologic classification of benign breast disease

<b>Nonproliferative lesions</b>
Cysts
Mild hyperplasia of the usual type
Epithelial-related calcifications
Fibroadenoma
Papillary apocrine change
<b>Proliferative lesions without atypia</b>

Sclerosing adenosis
Radial and complexing sclerosing lesions
Moderate and florid hyperplasia of the usual type
Intraductal papillomas
<b>Atypical proliferative lesions</b>
Atypical lobular hyperplasia
Atypical ductal hyperplasia

Table 2: Clinical classification of benign breast disease

Physiologic swelling and tenderness
Nodularity
Breast pain
Palpable lumps
Nipple discharge
Breast infections and inflammation

Table 3: Staging for Breast cancer by American Joint Committee of Cancers

<b>Stage 0:</b> Carcinoma <i>in situ</i> (non-invasive cancer).
<b>Stage I:</b> Tumor is small (2 cm or less), and cancer has not spread to the lymph nodes.
<b>Stage II:</b> Tumor is small, but cancer has spread to the lymph nodes; OR tumor is moderate in size (2 to 5 cm), with or without lymph node involvement; OR tumor is large (over 5 cm), but cancer has not spread to the lymph nodes.
<b>Stage III:</b> Tumor is large, and cancer has spread to the lymph nodes; OR tumor is of any size, but lymph node involvement is substantial; OR tumor is of any size, but cancer has spread to chest wall or skin.
<b>Stage IV:</b> Cancer has metastasized beyond the underarm lymph nodes to other parts of the body.

Table 4: Malignant cases

Diagnosis	=n	Mean age
Invasive ductal carcinoma	30(15%)	47
Lobular carcinoma	8(4%)	50
Medullary carcinoma	2(1%)	41
Total	40(20%)	

Table 5: Benign Lesions

Diagnosis	=n	Mean age
Fibroadenoma	85(42.5%)	23
Fibrocystic disease	50(25%)	39
Breast Abscess	25(12.5%)	27
Total	160(80%)	

## DISCUSSION

Breast cancer is one of the commonest causes of increased rate of mortality and morbidity worldwide among women and is also among the one of the leading cancers in West. The commonest manifestation of the breast cancer is a breast lump<sup>1,2,3</sup>. If a woman examines her own breast on regular intervals and feels any lump and visit doctor at early stage then the early diagnosis and cure can be made possible. It is well accepted that all lumps in breast are malignant unless proved otherwise. In our

study, the most common lesions found in female were benign lesions (80%), followed by malignant (20%). Fibroadenoma was the most frequent histopathological diagnosis (42.5%) in our study.

This frequency of fibroadenomas in our study is higher than the reported frequency in England (7.7%)<sup>13</sup> and the USA (18.5%)<sup>14</sup>, but is lower than the Caribbean Islands of Trinidad (39.3%)<sup>15</sup>. This increased frequency of fibroadenomas in Pakistan is unclear but can be attributed to racial predisposition which needs further research and evidence. Many other research workers have reported in their studies that fibroadenoma is the most common benign tumor of female breast<sup>16,17,18,19</sup>. Malignant lesions in our study comprised of 40 cases (20%).

Invasive ductal carcinomas (30 cases) were the most common malignant breast lesions in our study. The mean age of its presentation was 47 years. The findings of our study are different from the studies of Japan and the United States where malignant breast lesions are the third most common lesion (3.6%)<sup>14</sup>. In this study, the mean age at diagnosis is less as compared to that in western countries where majority of carcinoma are seen in postmenopausal woman and the mean age is 54 years<sup>20</sup>. Certain studies carried out in Pakistan have clearly shown that in Pakistani population, females between the ages of forty and fifty years are most commonly affected by malignant breast lesions<sup>18,21,22,23</sup>. Thus most of the female patients presenting to our breast clinics are premenopausal and in younger age group. In a Korean study high incidence of breast cancer in premenopausal women is reported<sup>20</sup>. In our study, fibrocystic disease was found in 25% of all cases. Compared with international studies, fibrocystic breast diseases are most common benign breast lesion in USA (33.9%)<sup>14</sup> and UK (37%)<sup>13</sup>.

## CONCLUSION

Breast lump is the commonest presentation of the breast cancer in women and is a rapidly growing problem in Pakistan. The incidence of malignancy is higher in women of age more than 30 years. The commonest subtype is the invasive ductal carcinoma. This study also shows that in contrast to certain international studies, Pakistani females present with malignant breast lesions at a younger age. Thus this warrants the need for a national screening programme and regular self examination of breast by females in Pakistan.

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