FREQUENCY OF BENIGN AND MALIGNANT BREAST LESIONS:
A HISTOPATHOLOGICAL ANALYSIS

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ABSTRACT

OBJECTIVE: To evaluate the frequency of benign and malignant breast diseases in females at Pathology Department, Al-Nafees Medical College & Hospital (ANMCH) Islamabad

STUDY DESIGN: A Cross sectional study

PLACE AND DURATION: From 10th January, 2015 to 20th October, 2015 at Department of Pathology, Al-Nafees Medical College & Hospital (ANMCH) Islamabad.

METHODOLOGY: 120 breast specimens collected in a period of 9 months at pathology laboratory, Al-Nafees Medical College & Hospital (ANMCH) Islamabad were fixed in formalin, processed by automated tissue processor. Slides were stained with H&E stain and examined by consultant histopathologist under light microscope. All slides were divided into benign and malignant cases. Malignant cases were further graded according to Modified Bloom and Richardson system.

RESULTS: Among total 120 breast specimens, commonest lesion is fibroadenoma (51%) followed by infiltrating duct carcinoma (12.5%), breast abscess (11.6%), fibrocystic change (10.8%), mastitis (3.3%) and medullary carcinoma (3.3%).

CONCLUSION: Benign breast lesions were more common than malignant lesions in our study. Fibroadenoma was the commonest breast pathology.

KEYWORDS: Frequency, Breast, Fibroadenoma, Infiltrating Ductal Carcinoma

INTRODUCTION

The frequency of breast lesions are increasing worldwide. The presentation of breast lesions depends upon socio-economic conditions, the level of health awareness and knowledge about breast diseases in general population. Breast carcinoma ranks first among all malignancies affecting females in most regions of the world. The impact of breast disease in the Western society assumes even greater importance as the incidence of breast cancer continues to increase steadily. There is vast difference in the range of breast lesions and epidemiology of breast carcinomas in different countries. Both benign and malignant diseases occur in men and women of all ages but benign lesion tend to occur more commonly at younger age than cancer. Benign breast diseases are common with estimate of over half of the female population at some time in life seeking medical advice for breast problem.

In Pakistan, various researches on breast conditions are mostly related to malignancies. Incidence of breast cancer varies being highest in North America and Western Europe, while it is lowest in Asia and Africa. The incidence of carcinoma of breast in Pakistan is high thus making it the most common malignancy among Pakistani females. To evaluate the spectrum of breast diseases, we are analyzing the biopsy findings of various breast lesions in our study. Fibroadenoma was the commonest breast pathology.

METHODOLOGY

It is a cross sectional study conducted at Department of Pathology, Al-Nafees Medical College & Hospital (ANMCH) Islamabad over a period of nine months i.e, from 10th January, 2015 to 20th October, 2015. All breast specimens of mastectomy, lumpectomy, needle biopsy and others were included in the study. Breast specimens from male patients were excluded from the study. A total of 120 specimens were analyzed. All specimens were collected in formalin and processed in automated tissue processor. Paraffin embedded sections were stained with the hematoxylin and eosin stain. Slides were examined by consultant pathologist under light microscope. Benign and malignant cases were separated. Grading of breast carcinoma was done according to the Modified Bloom and Richardson system. Frequencies of various breast lesions were calculated by SPSS version 20 and is represented in tables and graphs.

RESULTS

During the period of nine months, 120 breast specimens were received. The nature of breast lesions in order of decreasing frequency is presented in table I. Among the various breast lesions, fibroadenoma was the most common disease. It was found in 51%(n=61) of patients. Next common disease is
infiltrating ductal carcinoma found in 12.5 % (n=15) of patients. Grading was done for all 15 cases of infiltrating ductal carcinoma. Among them grade 1 includes 2 patients while grade 2 and 3 includes 7 and 6 patients respectively. Followed by breast abscess 11.6 % (n=14), fibrocystic disease 10.8 % (n=13), breast mastitis 3.3 % (n=4), medullary carcinoma 3.3 % (n=3), phyllodes tumor 1.6 % (n=2), tubular adenoma 1.6 % (n=2), infiltrating lobular carcinoma, mucinous carcinoma and metastatic carcinoma 0.83 % (n=1).

DISCUSSION

In Pakistan, the data regarding frequency of various breast lesions is limited. The studies mostly done have focused on breast cancer statistics. We have conducted this study in order to gain awareness about the distribution of breast diseases at our institute.

The most common disease in our study was fibroadenoma which is in concordance with other studies in Pakistan. In our study fibroadenoma is 51% which is higher than the documented frequency in England (7.7%) and USA (8.5%), but lower in Saudia Arabia and Jordan. The high frequency of fibroadenoma was also reported in black American, African and India as compared to low frequency in the Western white females. The causes of increased frequency can be related to the awareness of the patient to visit the doctor for a palpable lesion.

Ductal carcinoma of the breast has been reported as the second common among all breast diseases in our study. There are various studies in Pakistan which revealed that breast carcinoma is the most common breast disease among females and accounts for 25% of all tumors. In one study conducted at Karachi, breast carcinoma marked as the third commonest lesion in females. So, infiltrating ductal carcinoma is the common entity and its early diagnosis is very necessary for the benefit of patients.

Breast abscess is the third most common lesion in our study comprising 11.6%. Fibrocystic disease marks as fourth common lesion in our study comprising 10.8% of the total lesions. It is very common breast disease in England (37%) and America (33.9%). According to one study in Saudia Arabia, it comprises the second common lesion because of increased biopsy and mammographic application. As it ranks at different levels at different areas, to detect it as early as possible regular mammography has to be done.

Mastitis comprised 3.3% and has low frequency than the documented cases in other studies because presentation of mastitis in patients is delayed till it is symptomatic and forms an abscess. It is easily managed by the use of medication so there is less chances of high rate of these lesions.

Fibroadenoma is the commonest diagnosis. Infiltrating ductal carcinoma (Not otherwise specified) is the commonest malignant type of breast carcinoma.

CONCLUSION

Fibroadenoma is the is commonest diagnosis. Infiltrating ductal carcinoma (Not otherwise specified) is the commonest malignant type of breast carcinoma.

**TABLE I: BENIGN AND MALIGNANT BREAST LESIONS. (n=120)**

<table>
<thead>
<tr>
<th>S. No</th>
<th>TYPE OF LESION</th>
<th>NO. OF CASES (n)</th>
<th>PERCENTAGES (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BENIGN 83%</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Breast Abscess</td>
<td>14</td>
<td>11.5%</td>
</tr>
<tr>
<td>2</td>
<td>Fibroadenoma</td>
<td>61</td>
<td>50.7%</td>
</tr>
<tr>
<td>3</td>
<td>Fibrocystic disease</td>
<td>13</td>
<td>10.7%</td>
</tr>
<tr>
<td>4</td>
<td>Lipoma</td>
<td>2</td>
<td>1.6%</td>
</tr>
<tr>
<td>5</td>
<td>Phyllodes tumor</td>
<td>2</td>
<td>1.6%</td>
</tr>
<tr>
<td>6</td>
<td>Tubular adenoma</td>
<td>2</td>
<td>1.6%</td>
</tr>
<tr>
<td>7</td>
<td>Mastitis</td>
<td>4</td>
<td>3.3%</td>
</tr>
<tr>
<td>8</td>
<td>Others</td>
<td>1</td>
<td>0.8%</td>
</tr>
<tr>
<td><strong>MALIGNANT LESION 17%</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Primary Tumor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Infiltrating ductal carcinoma</td>
<td>15</td>
<td>12.5%</td>
</tr>
<tr>
<td>b.</td>
<td>Infiltrating lobular carcinoma</td>
<td>1</td>
<td>0.8%</td>
</tr>
<tr>
<td>c.</td>
<td>Medullary carcinoma</td>
<td>3</td>
<td>3.3%</td>
</tr>
<tr>
<td>d.</td>
<td>Mucinous carcinoma</td>
<td>1</td>
<td>0.8%</td>
</tr>
<tr>
<td>2</td>
<td>Metastatic Tumor</td>
<td>1</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

**CONTRIBUTION OF AUTHORS:**

Anum Usman: Corresponding author, provoking the idea of manuscript, introduction and methodology writing.

Nauman Noor: Data gathering, summarizing the Results and discussion writing.

Ayesha Ali: Collection of References for introduction & discussion

Noor Khan Lakhnana: Histopathological diagnosis of all breast specimens

Humaira Zafar: Final formatting of entire manuscript
REFERENCES