ORIGINAL ARTICLE

Breast carcinoma in the patients presenting with lump breast, in urban areas of Muzaffarabad, Azad Kashmir

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Absract:
Objectives: To determine the frequency of breast carcinoma in clinically palpable breast lumps.
Study design: Case series
Setting and duration of the study: Surgical unit of Sheikh Khalifa bin Zayed/Combined Military Hospital (SKBZ/CMH), Muzaffarabad, Azad Kashmir. From February 2015 to December 2017
Material & Methods: All patients above 13 yrs of age, presenting with clinically palpable lump breast in surgical out patient department were registered for the study, after taking their informed consent. Fine needle aspiration cytology (FNAC) of the lump breast was taken in pathology department and then cytological reports were recorded.
Results: Total 129 cases were registered in the study between the ages of 13 to 80 yrs old with the mean age of 46 yrs. Of the total 57.4% (74) were benign lumps, 35.7% (46) were malignant lumps, 1.6% (2) were atypical cases and 5.4% (7) were highly suspicious for malignancy
Conclusions: The frequency of breast carcinoma in present group of patients who presented with breast lump was 34%.

Keywords: Breast lump, fine needle aspiration cytology (FNAC), ductal carcinoma, lobular carcinoma, fibroadenoma

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Introduction:
All over the world, breast carcinoma is becoming the important cause of all cancer related deaths, and mostly in the developing countries.[1,2] Not only in the developing countries breast carcinoma is also becoming a problem of developed countries like United States, Japan and China.[3] According to American Cancer Society (ACS), in 2008, 182,460 women among all the patients presenting with breast lumps, were diagnosed as a case of breast cancer in United States, out of all these cases 40,480 died of the disease during the same year.[4,5] Worldwide incidence of breast carcinoma ranges between 16.12%-23%,[6,7] and accounts for 30.24% of all female cancers.

In Pakistan, health education system of population is in process and exact statistics of breast cancer are difficult to describe because of lack of patient education about the breast problems. Due to all these technical issues there is lack of tumor case registration in hospitals which subsequently results in some what error in exact calculation of breast cancer statistics.[7,8]

Multiple conditions present as a case of breast lump, so all the palpable lumps are not malignant. Before proceeding to the treatment, specific investigations are taken over the lump for its accurate diagnosis. The most important tool of investigation is triple assessment which includes history and clinical examination, radiological and cytological investigations in this study.[9,10]

Table-1: Detail of frequency and percentages of each type of diagnosed Breast lesions found in the Study

S.#	Diagnosis	Frequency	Percent (%)
1	Acute mastitis	5	3.9
2	Chronic mastitis	3	2.3
3	Galactocele	4	3.1
4	Fibrocystic disease	4	3.1
5	Simple cyst	1	0.8
6	Abscess	16	12.4
7	Gynecomastia	5	3.9
8	Atypical cells	1	0.8
9	Fat necrosis	3	2.3
10	Suspected malignancy	6	4.7
11	Ductal carcinoma	44	34.1
12	Fibro adenoma	34	26.4
13	Inflammatory carcinoma	1	0.8
14	Hodgkin lymphoma	1	0.8
15	Normal breast tissue	1	0.8
	Total		100.0

The screening programs help in early detection of the breast lumps, include self examination by the patient and followed by triple assessment, in case of any detectable abnormality, are not properly implemented in Pakistan due to lack of public education.[1,2]

Study rationale was that breast cancer is one of the highest reported incidences in Pakistan among Asian countries.[1] This study is conducted to determine the disease burden in the study area so that this knowledge helps in developing the educational policies, screening programs and management strategies. As, If a lump is diagnosed early and treated according to the guidelines, it results in better prognosis.

Material & Methods:
Total 129 patients including both males and females, between the ages of 13 yrs and 80 yrs, presented with clinically palpable lump in breast, in surgical opd of Shiekh Khalifa Bin Zayad Al-Nahyan/ CMH, Muzaffarabad from February 2010 to December 2015.

After taking the informed consent from all these patients, fine needle aspiration cytology (FNAC) of the breast lumps were taken under aseptic conditions. Cytological examination was done and a final diagnosis was made. In case of atypical cases and highly suspicious cases additional incisional or excisional biopsy was done as no facilities of true-cut and core-needle biopsy was available in our centre. All information's about the patient including age, sex, marital status, duration of lump, history of risk factors and pathological diagnosis were collected. After collecting all the information's management plans were decided and discussed with the patients. The disease was staged clinically and pathologically, and then final data was formulated.

Data was analyzed by using SPSS version 20. Mean and standard deviations were computed for numerical variables like age. Frequency and percentages were calculated for categorical variables like benign and malignant diseases.

Results:
FNA materials and/or biopsies were obtained from 129 patients (128 females and 1 male) with breast palpable lumps. The ages of the study patients ranged from 13 to 80 years, with a mean age of 46 years. The diagnoses of the 129 breast lesions were as follows: 44(34%) were ductal carcinoma, 6(4.7%) were suspected for malignancy, 1(0.8%) case of Hodgkin lymphoma, 34 cases (26.4%) were fibroadenoma, 16 cases (12.4%) were breast abscess, 4 cases (3.1%) were fibrocystic change, 5 cases (3.9%) were acute mastitis and 3 cases (2.3%) were chronic mastitis, 1 case (0.8%) was simple benign cysts, a (8 cases), gynecomastia (5 cases), Galactocele (4 cases), Fat Necrosis (3 cases) as shown in table 1.

Of the malignant cases, 8 cases (18-1%) were detected with T1 N0 M0, 20 cases (45.4%) with T2 N0 M0, 12 cases (27.2%) were detected with T3 N1 M0 and 4 cases (9%) were detected with T4 N2 M1. The primary lesion sites were found as follows: left side (cases 26, 59%), right side (cases 18, 41%) and no bilateral lesion was found. Moreover, 60% of the fibroadenoma lesions were observed at the left side; 89% of the lesions were found as mobile lumps, and the remaining 11% were fixed. Furthermore, of the

129 patients, 20 cases (15.5%) were found with nipple discharges, among which 4 cases (20%) were patients with cancer. Concerning the distribution of the study population by age it was apparent that most of the patients with breast carcinoma were of younger ages. Ductal carcinoma was reported in 44 cases which were 34% of total patients presented wirh breast lump during this study. 19 cases (43.4%) were in age group of 20-40 years, 16 cases (36.6%) had the age group of 40-60 years and 9 cases (20%) were above 60 year of age. No case of ductal carcinoma was reported below 20 year of age. Furthermore, of the 70 patients were married among whom 30 cases (42.8%) were having malignant changes; conversely, 59 were patients unmarried among whom fibroadenoma was detected in 30 (50.8%).

Discussion:

Breast is a modifoied sweat gland and consists of multiple alveoli which drain into ductules, which further form ducts by combining with the other ductules. This complex of alveoli and ductules forms a lobule which is drained by a lactiferous duct. Each breast consists of 15 to 20 lobules and their lactiferous ducts drain through nipple. As in any other site, abnormal proliferation of breast cells leads to the formation breast carcinoma. There are two main variants of breast carcinoma, one is ductal carcinoma and other is a lobular carcinoma.[11]

There are multiple risk factors for the carcinoma of breast like age, gender, age at menarche and menupause, age at first baby birth, use of oral contraceptive pills, nulli-parity and lack of lactation. But most of the times, risk factor in a single case is very hardly identified. Every woman reacts differently to a lump breast. Sometimes they are shy and are hesitant to show or discuss their problem, sometimes patient suffers a fear of being diagnosed as a case of carcinoma, many times patient feels an in-security that treatment may lead her to a disfigurement and consequent loss of sexual attractiveness, and in many cases it also happens that the patient is fully unaware of the fatality of the disease. These all are the factors which hinder early diagnosis and treatment of the disease. Early diagnosis is the key to increased survival.[12,13]

Most of the studies on breast carcinoma show that the incidence of the breast carcinoma increases with age and maximum number of patients are above 50 yrs. socio-economic status of the patients also affects the incidence of the carcinoma breast as it is higher in the high socio-economic groups of urban areas. This is may be due to unhealthy dietary habits, lack of exercise, sleep disturbance and excessive use of electronic media. All these modifications in life style are responsible for increase in incidence of malignant breast lesions.[14,15,16]

Our results showed more incidences in young age groups in contrast to previous studies and less incidence in old age group. 19 cases (43.18%) out of 44 were in age group of 20 to 40 yrs, 16 cases (36,36%) out of 44 were in age group of 40 to 60 yrs and 9 cases(20.45%) out of 44 were in group of 60 to 80yrs. In our study more cases reported in T2 N0 M0 (45.4%) and T3 N1 M0 (12.27%) stages.

In one of the studies conducted in Pakistan about the risk factors of carcinoma breast and prognosis of disease according to stage, showed that there was no significance of age at menarche or menopause and the body weight in relation to the breast carcinoma, as published in data from the western countries. But an important point to be noted in this study was that the late stage (stage III, stage IV) is considered to have bad prognosis. Advanced stage IV is considered to be incure with survival for less than 2.7 years without treatment.[17,18] this shows that every possible effort should be made to diagnose breast cancer at an early stage. To diagnose a case of breast carcinoma at an early stage, there is a need of developing health educational programs in public which give basic awareness about the disease and should demonstrate the steps of self examination of breast. Screening programs based on triple assessment should be started as screening helps in early detection of the disease

and hence better prognosis. Sometimes in areas of low socio-economic status, screening programs like mammogram is very expensive and, therefore, is not affordable for the most part of the populations,[16,19,20] This study was conducted to study the disease burden in study area so that a future planning can be done for the public health education about breast carcinoma. Also a proper screening program based on triple assessment should be started so the disease is diagnosed at an early stage with a better prognosis.

Conclusion:
Breast carcinoma is alarmingly increasing in young age group of 20 to 40 yrs of age in our area. Which needs development of public education and screening program and improvement in health facilities, so that carcinomas can be picked at early stage and be treated, resulting in better prognosis.

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Role and contribution of authors:
Dr Naheed Akhtar, collected the data, references did the initial writeup

Dr Farzana Sabir, helped in collecting the data and references

Dr Maryum Zubair, helped in reference collection and also helped in discussion writing

Dr Raja Ijaz, helped in collecting the data and helped in introduction writing

Dr Rizwan Abid, critically review the article and made the final changes

Dr Masood Kant, helped in collecting the data and helped in initial writeup

Dr Amir Zeb, helped in discussion and result writing

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