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Brief Communication

Clinico-Morphological Patterns of Breast Cancer in Manipur, India.

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Background: Breast cancer is among the most common malignancy affecting females. The aim of the study is to evaluate the clinico-morphological patterns of breast cancer.

Methods: This retrospective study was conducted from January 2006 to December 2010 in RIMS Hospital, Imphal, Manipur. Study included all histologically diagnosed cases of female breast carcinoma during the above mentioned period. Detailed clinical data including age, site, side, family history and histological reports were retrieved from the records section.

Results:A total number of 142 cases were studied with ranging from 25 years to 76 years having a mean age of 46.8 years. Most common age group was seen in 41-50 years with 49 cases (34.5%). Infiltrating duct carcinoma (IDC)- no special type was the commonest type with 109 cases (76.76%), followed by infiltrating lobular carcinoma (ILC) with 22 cases (15.49%). The disease was left sided in 104 cases (73.24%) and right sided in 38 cases (26.76%). TNM Staging was available in 89 cases, Stage IIIB (47.19%) was the commonest followed by stage IIIA with 26 cases (29.21%). Majority of the cases were grade III, seen in 81 cases (57.04%), followed by grade II with 42 cases (29.58%) and grade I with 19 cases (13.38%).

Conclusion: Breast carcinoma is still a common problem affecting females with invasive ductal carcinoma being the commonest. A higher percentage of high grades and a late stage of presentation are due to lack of proper screening and awareness programme in the state.

Key words: Breast cancer, infiltrating duct carcinoma, lobular carcinoma, TNM staging.

Introduction

Breast cancer is the most frequently diagnosed cancer in females in the United States, affecting 1 in 8 women with an estimated 207,090 new cases 0f invasive breast cancer.[1]

In India, breast cancer accounts for about 19-34% of all cancer cases among women. As per national and regional cancer registries, it is the commonest cancer amongst women in Delhi, Mumbai, Ahmedabad, Kolkata and Trivandrum.[2-4]

In Manipur, Breast cancer is the third leading site among females with a relative proportion of 10.6%, the first and second being Lungs and carcinoma cervix.[5]

All women are at risk of developing breast cancer regardless of their racial or ethnic origin. The major factors that affect breast carcinoma development are effect of genetics and environment, the reproductive experience, the effect of endogenous and exogenous hormones.[6]

Several clinical and morphological parameters such as histological type, tumour grade, axillary lymph node involvement, bilateralityetc.have been established as the predictors of tumour behaviour in breast cancer patients. Treatment decisions are being taken up by the clinicians based on these factors.

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The purpose of this study was to describe the clinic-pathological features of breast cancer in the current local scenario which would make a difference in the management of breast carcinoma in future. Further, the results of the study can provide data for epidemiological interests and help compare the local data with other parts of the country and elsewhere.

Material and Methods

This retrospective study was carried out in the histopathology section, Pathology department, Regional Institute of Medical Sciences (RIMS) Hospital, Imphal, India, from January 2006 to December 2010. Study included all the newly diagnosed female breast cancer by histopathology during the above mentioned period. Care was taken to avoid double entry of the patients. All the patients who presented with in site carcinoma and recurrence and those patients having metastasis in breast with primary tumour outside breast were excluded from the study.

Detailed clinical data including age, site, and family history were recorded and analysed. Approval was obtained from the Institutional Ethics Committee.

Results

A total of 142 cases were included during the study period.

Age: The mean age of the patient was 46.8 years with a standard deviation of 12.2 years. The youngest patients were 25 years and the oldest was 76 years old. The commonest age group was 41-50 years with 49 cases (34.5%) followed by 31-40 years with 42 cases (29.58%). Table 1.

Table1: Distribution of cases with age

Age group	Number	Percentage
21-30	9	6.33
31-40	42	29.57
41-50	49	34.50
51-60	24	16.90
61-70	12	8.45
Above 71	6	4.22

Religion: Analysis of data by major religious groups indicated that 80%, 11.4% and 8.6% belonged to Hindus, Christian and Muslim communities respectively. It may be noted that the comparative population of Christians and Muslims are quite low in the state. Moreover the Christian population are distributed in far flung hilly areas and seek medical advice very late.

Microscopic types: Among the various histomorphological types, IDC (NOS) was found to be the commonest type with 109 cases (76.76%). This was followed in decreasing order by infiltrating lobular carcinoma (ILC) in 22 cases(15.49%);medullary carcinoma in 8 cases(5.64%); papillary carcinoma in 2 cases(1.41%) and one case of malignant phylloides (0.7%).(Table 2)

Table 2: Microscopic types

Histologic types	Number	percentage
IDU	109	76.76
Lobular carcinoma	22	15.49
Medullary carcinoma	8	5.64
Papillary carcinoma	2	1.41
Malignant phylloides	1	0.7
Total	142	100

Reproductive history: It was observed that 2 cases (1.41%) were unmarried, both falling in the age group 21-30 years. Out of the 140 married women, 3 cases (2.11%) revealed history of nulliparity.

Bilaterality and side: The disease was found on the left side in 102 cases (71.83%) and on the right side in 38 cases (26.76%). Amongst the 142 cases, 140 cases (98.59%) presented with unilateral breast lump that was proven to be cancerous. Two cases (1.41%) presented with bilateral breast lumps, subsequently proven to be cancerous. Out of the two bilateral cases, 1 case revealed a positive family history of cancer.

TNM staging: TNM staging was available in 89 patients. The most common stage of presentation

was IIIB with 42 cases (47.19%) followed in decreasing order of frequency by stage IIIA with 26 cases (29.21%), IIB with 11(12.36%) cases,IV with 7 (7.87%) and stage I with 3 (3.37%) cases.(Table-3)

Table 3: TNM Staging

TNM stage	Number	Percentage
IIIB	42	47.19
IIIA	26	29.21
IIB	11	12.36
IV	7	7.87
I	3	3.37

Lymph node status: Lymph node positivity was analysed histologically in all the 89 cases. Histopathological confirmation of lymph node involvement was observed in 81 cases (91.01%).

Discussion

The incidence of breast cancer is increasing worldwide. In India, breast cancer has become the most common cancer among women in many regions overtaking cervical cancer.[7] Because of the continuing rise in breast cancer incidence an urgent need to develop strategies for prevention is very much required.

Carcinoma breast have a complex etiology some of which are hormonal, genetic and environmental factors operating over a long period.[7] Age is an important factor for both occurrence and management of case. Average age in six hospital based cancer registries in the National Cancer Registry Project network for the period 1994-98 was found to range from 44.2 years in Dibrugarh to 49.6 years in Bangalore and Chennai registries.[2] Similar hospital based studies carried out at Delhi and Jaipur have also reported that the average age of breast cancer cases to be as 46.8 years and 47 years.[8,9] The average age of occurrence of breast cancer amongst US white females is 61.0 years.[10] In the present study the average age of the breast cancer at presentation was found to be 46.8 years. The average age of occurrence in India seems to be earlier compared to western countries.

The reason for early age of occurrence in India needs to be further studied. Similar findings were reported by Borovanova etal[11] in the Czech population and by Saxenaetal in India.[7] According to these statistics it can be said that women of the middle age group (30-59 years) are at a higher risk of developing breast cancer in the local set up. Proper awareness and screening programmes are the need of the hour.

It has been well documented that histological type is one of the major prognostic factor. The most common histological type found was infiltrating ductal carcinoma. This finding was similar to local and international studies. National Cancer Registry Programme revealed that in Mumbai, Bangalore and Thiruvananthapuram, Infiltrating duct carcinoma was the most common histological type.[2]Saxenaetal also reported similar findings in Delhi.[7]In the US population, [6] Finland and Nigeria[12] also, infiltrating ductal type of breast carcinoma was found to be more common

Stages in which disease presented were mostly in stageIII (IIIB and IIIA) accounted for about 76.3% in the present study and about 3.37 % in stage IV. This means that the disease is still presenting at a late stage making curative treatment difficult. The reasons could be due to lack of awareness, fear of disease and psychological reasons. Most of the patients try to ignore or hide the disease. Similar studies in India[7] and Pakistan[13] reveal that breast cancer frequently presently presents at higher stage.

Various reproductive factors have been identified that have been associated with breast cancer. Unmarried and nulliparous women had higher incidence of breast cancer.[14,15,16] In our study only 2 cases (1.41 %) were unmarried and 3 cases (2.11%) were nulliparous.

Breast cancer usually presents with unilateral single hard lump as evident in the present study. About (98.59%) presented with single unilateral breast lump. Only two cases (1.41 %) were bilateral in the present study similar to findings by Monsouret al.[17]

Conclusion

Carcinoma breast is a common cancer affecting young to middle age group with invasive ductal

carcinoma being the commonest histological type. High grade and a late stage presentation should be a common concern. Proper awareness and screening programmes is the need of the hour.

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