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CLINICAL PRESENTATION OF BREAST CANCER PATIENTS ATTENDING AT REGIONAL INSTITUTE OF MEDICAL SCIENCES, MANIPUR

Oncology

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ABSTRACT

Background: Increasing incidence of breast cancer has been a major health problem for women in Manipur. Knowledge of clinical presentation of patients with breast cancer may help in planning prevention, screening and treatment of breast cancer in this region.

Methods: This is a retrospective case series study on 150 cases of breast cancer patients who were registered at Regional Institute of Medical Sciences, Manipur during the period from January, 2014 to December, 2016. The data were analyzed using SPSS-21 and results were presented in percentage and simple frequency.

Result: Majority (60.0%) of the patients were in the age group of 31-50 years. The commonest presenting symptoms were painless breast lump (90.6%) and the commonest histopathology observed was IDC-NOS (95.3%).

Majority of the patients were in stage II(42.6%), illiterate(56.0%), belonged to Class III socio-economic status(50.0%) and age of menarche in majority of the patients(56%) was in the age group of 10-12 years. 91 patients (63.0%) were post menopausal patients. Maximum numbers of patients (86.6%) were multiparous and had history of breast feeding (82.6%) not less than 4 months. 77 patients (51.3%) had normal body mass index(BMI). Only 4 patients (2.6%) had family history of breast cancer. Among 140 operable patients, majority of them(50.0%) were both ER and PR negative, expressed 3+ HER-2/neu (48.0%) and had histological grade III tumor (89.2%).

Conclusion: Delay in treatment of breast cancer and further increased incidence rate could be minimized in this region by improving the awareness regarding the risk factors, socio-demographic factors and clinical presentation of this leading cancer.

KEYWORDS

Breast cancer, Clinical presentation, Risk factors

Introduction: Worldwide, breast cancer is the second most common cancer in women with an estimated 1.67 million new cancer cases diagnosed in 2012 (25% of all cancers). It is the most frequent cause of cancer death in women in less developed regions (324,000 deaths, 14.3% of total). But in more developed regions, it is the second cause of cancer death (198,000 deaths, 15.4%) after lung cancer.[1]

In India, incidence rate of breast cancer is much lower compared with Western countries.[2] Nonetheless, breast cancer is now the most common cancer in Indian women and even recently overtaken cervical cancer.[3]

The latest National Cancer Registry programme (NCRP), 2012 -2014 had reported that Delhi had the highest incidence rate of breast cancer at an age-adjusted rate of 41.0, followed by Chennai at 37.9 and Bangalore at 34.4. Moreover, the recent NCRP also had shown breast cancer to be the commonest cancer in females with age-adjusted incidence rates (AARs) of 9.7/100000 in Manipur State[4].

Despite, incidence rate of breast cancer is known to vary from region to region as per the prevailing risk factors, common risk factors are early menarche, delayed menopause, nulliparity, family history of breast cancer, lack of breast feeding practice etc. [5,6,7,8]

Moreover, in management of breast cancer, clinico-pathological parameters such as tumour size, type, grade and lymph node status are useful in the classification, treatment and prognostication .[9,10,11,12,13,14,15]

Thus, further knowledge on clinical presentation may be useful not only in treatment planning but also in screening and early detection of breast cancer.

This study was aimed to evaluate the clinical presentation and risk factors among breast cancer patients attending Regional Institute of Medical Sciences, Manipur.

METHODS:

This study is a descriptive study on 150 case series of breast cancer who were registered at Regional Institute of Medical Sciences (RIMS),Manipur after histopathological confirmation during the period from 1st January 2014 to 31st December 2016 and case notes of those 150 patients were reviewed for clinical presentation like ages, presenting symptoms, tumor side, size and location , Metastatic Lymph Nodes positivity, histopathology and staging along with findings of clinical history like socio-economic status (Modified BG Prasad's Classification), education level, body mass index(BMI) ,age at menarche, menstrual status, parity, breast feeding, family history of breast cancer etc. Cases without complete information and other cases who had history of previous cancer treatment prior to registration were excluded in the present study. An approval from the Institutional Ethics Committee for research involving human subjects was obtained before the study was conducted. Confidentiality of the patient's identity was maintained. The data were analyzed using SPSS-21 and descriptive statistics was used as type of statistical analysis test.

RESULTS:

Among the patients, the ages ranged from 28 to 76 yrs. The mean age of presentation was 52.6 ± 0.82 yrs. The number of patients reaches a peak between 31 - 50 years (60.0%), then begins to decline in the age group of 51-76 years (35.4%) as shown in Table-1.

Mean duration of symptoms was 9.0 months. Left breast was involved in 52.0% cases, right in 46.0% cases and 2.0% had bilateral involvement. Quadrant involvement were Upper Outer-42.0%, Central-3.4%, Upper Inner-21.3%, Lower Outer-20.0%, Lower Inner-7.3% and more than one quadrant was involved in 6.0% cases. Painless

lump (90.6%) was the most common presentation, 4.0% presented with nipple discharge, 2.0% presented with painful breast lump, 3.4% presented with axillary palpable swelling. Mean size of lesion was 7.0 cm diameter, ranging from 1cm to 14 cm. 15.4% lesion size were <2 cm, 46.6% were 2-5cm and 38.0% were >5 cm. The histological classification revealed a predominance of invasive duct carcinomas (95.4%) followed by lobular carcinomas (3.3%) and medullary carcinomas (1.3%). The patients were staged according to the TNM Staging system (AJCC 7th edition) . Only 9.4% of total patients presented in Stage I, 42.6% in Stage II , 41.3% in stage III and 6.7% in stage IV respectively.

Among the total 150 cases,140 cases(93.3%) were operable.1 to 3 nodes(41.5%), 4 to 10 nodes(33.5%) and more than 10 nodes(25.0%) of axillary lymph node were removed during surgery. Mean number of lymph nodes dissected out was 15 (range: 3-29). Mean number of involved nodes was 5(range: 1-27).Modified Bloom- Richardson Grading was applicable to all 140 cases. Majority of the cases(89.2%) had Grade III tumor followed by Grade II (16.4%) and Grade I(1.4%) respectively.

70 cases (50.0%) were both ER and PR negative, 52 cases (37.1%) expressed both ER and PR, 10 cases(7.1%) cases expressed only ER and 8 other cases(5.8%) cases expressed only PR.

Regarding HER-2/neu expression, 67 /140(47.8%) cases were 3+ ,11/140(7.8%) cases were 2+ and the remaining 61/140(44.4%) were either 1+ or 0.

Table-1: Clinico-pathological presentation of patients (n=150)

Variables	Frequency	Percentage(%)
AGES (YEARS)		
Less than 30	7	4.6
31-50	90	60.0
51-70	49	32.6
Above 70	4	2.8
PRESENTING SYMPTOMS		
Breast Lump	136	90.6
Nipple discharge	6	4.0
Painful breast lump	3	2.0
Axillary palpable swelling	5	3.4
SIDE		
Left	78	52.0
Right	69	46.0
Bilateral	3	2.0
TUMOR LOCATION		
Upper outer	63	42.0
Upper inner	32	21.3
Lower outer	30	20.0
Lower inner	11	7.3
Central	5	3.4
More than one quadrant	9	6.0
HISTOPATHOLOGY		
IDC-NOS	143	95.4
Medullary	2	1.3
ILC	5	3.3
Others	0	0
STAGING		
I	14	9.4
II	64	42.6
III	62	41.3
IV	10	6.7

As shown in Table-2, among 150 patients, 84 patients (56.0%) were illiterate and only 15(10.0%) patients were from higher socio-economic status (Class I and II). 50.0%, 30.0%, and 10.0% of the total 150 patients were found to be in poor socio-economic classes III, IV, and V, respectively. Age at menarche ranged from 10 - 16 years, majority of patients(56.0%) had menarche between 10-12 years; mean age at menarche was 13.3 years. 91 patients (60.6%) were post menopausal patients.

59 patients (39.4%) were obese (BMI>25). In this study only 20(13.4%) of patients were nulliparous, 130 (86.6%) females were multiparous. Majority of the patients (82.6%) had practised breast feeding not less than 4 months. Only 4 patients (2.6%) had family history of breast cancer.

Table-2: *RISK FACTORS FOR BREAST CANCER (n=150)*

Variable	Frequency	Percentage (%)
Socio economic status		
1	6	4.0
II	9	6.0
III	75	50.0
IV	45	30.0
V	15	10.0
Education level		
ILLITERATE	84	56.0
PRIMARY EDUCATION	15	10.0
SECONDARY EDUCATION	27	18.0
ABOVE SECONDARY EDUCATION	24	16.0
Age at menarche(Years)		
10-12	84	56.0
12-14	40	26.6
14-16	26	17.4
Menstrual status		
Pre-Menopausal	59	39.4
Post-Menopausal	91	60.6
Boy mass index(BMI)		
Less than 18.5(Underweight)	14	9.3
18.5-24.9(Normal)	77	51.3
More than 25(Overweight)	59	39.4
Breast feeding		
Breast fed	124	82.6
Not fed	26	17.4
Parity		
Nulliparous	20	13.4
Multiparous	130	86.6
Family history		
Positive	4	2.6
Negative	146	97.4

Discussion:

In the present study, Majority of patients (60%) were in the age group of 31-50 years similar to the findings of previous studies in other high-incidence regions in India[24]. In contrast to our findings, 37-42.0% of the patients belonged to the age group of 41-50 years in maximum study of India.[16,18,22,25]

Moreover, in few other studies in India[20,26,28] 48-54% of the patients were in the age group of 40-60years

In our study the most common presenting symptom was painless breast lump (90.6%) which was slightly more common on the left side (52%) in comparison to right side (46%). Majority (42%) of the patient had lump in the upper outer quadrant. Few of the patients also had nipple discharge (4%) and painful lump (2%). Such similar findings have been seen in other studies also[16,23,26,27,28].

Invasive ductal carcinoma was the most common histopathology accounting for (95%) followed by lobular carcinomas (3%) and medullary carcinomas (1%) respectively similar to other Indian studies[16,17,18,27,28].

Maximum number of our patients (83.3%) were grade III tumour in contrast to other studies of india where grade II and grade I tumour were more common.[18,20,24,27]

As per our findings, more number of patients were ER and PR negative (50.0%) and less number of patients were ER and PR positive(37.1%) compared to the findings of few studies breast [1,4,5] where percentage of ER-/PR- ranged from 30.7-42.19% and ER+/PR+ patients ranged from 56.0% to 60.4%.

Among our operable cases, Her-2/neu was found to be negative in 72cases (51.4%) and triple negative in cases 35(25.0%)in contrast to a study finding [18] where 70.0% of the total patients were Her-2/neu negative and triple negative in 35.0% of total patients.

Similar to other studies [18,20], more patients (42.6%) in this study presented in stage II , 62patients (41.3%) in stage III,10 patients(6.7%) in stage IV and minimum patients presented in stage I (7%).Thus, majority of the patients presented with advanced stages and the reason could be delayed access to health care service and lack of awareness of breast cancer among women in this region.

In this present study 56.0% patients were illiterate which is almost similar to other study in india[16,18] and only 15patient (10.0%) were from higher socio-economic status(Class I and II). 50.0%, 30.0%, and 10.0% of the total 150 patients were found to be in poor socio-economic classes III, IV, and V respectively. So in comparison to other study in india, our study shows more patients were from very low socio-economic status family[18].

Several reproductive risk factors have been identified and evaluated. Patient with early menarche or late menopause was more in this study which is similar to other study findings[28].Other study[28] findings had

reported nulliparity and not breast fed to be the risk factor which is in contrast to the findings of the present study where more number of patients were multiparous(86.6%) and had history of breast feeding(82.6%). Though BMI of maximum patients (51.3%) was within normal limit, still many patients were overweight (39.4%). So according to our study, obesity may be accounted as a risk factor for developing breast cancer as shown in other study.[29]

In our study maximum patients (97.4%) had no previous family history of breast cancer similar to other studies[16,22,23,26].

Conclusion:

Delay in treatment of breast cancer and further increased incidence rate could be minimized in this region by improving the awareness regarding the risk factors, socio-demographic factors and clinical presentation of this leading cancer.

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Conflict of interest

The authors affirm no conflict of interest in this study.

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