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Research Article

Presentation and Management of Breast Cancer Patients in A Newly Started Medical College Hospital

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Abstract: The aim of this study is to report our experience concerning the presentation of breast cancer patients and their management in a newly started medical college hospital. An open non-comparative cross-sectional study was performed on breast cancer patients presenting at our setup in the initial two years. Patients presenting with breast lump, nipple discharge and/or breast pain were evaluated by clinical, pathological and radiological modalities. They were staged and treated as per standard protocol. Follow up was carried out over these two years, minimum for 6 months. Comparable results with other developed centers were obtained. Carcinoma Breast can be well treated even in a newly started setup with limited facility and availability of radiotherapy center in the near vicinity.
Keywords: Carcinoma, breast, mastectomy

INTRODUCTION

Carcinoma breast is the most common cancer in women worldwide with a high mortality incidence. In India breast cancer is second most common malignancy in females [1]. Owing to the lack of awareness of this disease and, reluctance to consult any cancer center, the majority of breast cancers are diagnosed at a relatively advanced stage. Most of the patients consult at general hospital like ours directly with complaints of breast lump, pain and/or nipple discharge and readily accept treatment modalities offered to them. Diagnostic modalities for breast cancer include clinical examination, sono-mammography and pathological examination which are low cost and can be easily made available in any general hospital. Options for breast cancer management are surgery, radiation therapy, chemotherapy and hormonal therapy. Surgery, chemo and hormonal therapy can be easily offered at any general hospital, however it is important to have radiotherapy facilities in near vicinity for proper management of breast cancer patients. In our hospital we had such facility and guidance of experienced surgeon practicing cancer surgery for years. Radiotherapy center is also situated nearby, so radiation facility could be easily availed. With proper management most of the patients can be treated with results comparable with any developed center.

MATERIAL AND METHODS

All female patients attending surgical OPD with breast lump/pain or nipple discharge from March 2011 to April 2013 were evaluated to carry out this study. Only those patients diagnosed of having carcinoma breast and taking treatment from our hospital were selected for the study. Minimum follow up was 6 months. We included 60 such patients. A proforma was prepared to study presenting features and management from history taking, clinical examination, pathological and radiological examination. Information regarding age, parity and menstrual status was obtained. During clinical examination size of breast lump and lymph node status were noted.

Sonomammography was performed in all patients of age>35 years and females less than 35 years of age were offered Ultrasonography alone. Metastases were searched by chest radiogram, ultrasonography of abdomen and liver function test. In selected cases we referred patient to higher center for PET scan to rule out distant metastasis. Pathological confirmation was obtained using FNAC as primary means. In FNAC inconclusive case Trucut biopsy was performed. Lumpectomy (Frozen section) was performed only were both FNAC and Trucut failed to provide definite diagnosis.

TNM staging was carried out clinically and patients having stage 3 or less were subjected to surgery and stage 4 patients were given palliative treatment as per standard protocol.

Treatment modalities include surgery, chemotherapy, hormonal and radiation therapy.

Histopathological examination and immunohistochemistry for ER, PR and Her-2-neu were carried out and prognosis was assessed. Follow up was carried out for minimum 6 months and maximum 2 years.

RESULTS

In 60 cases of carcinoma breast studied over two years at our hospital following data were obtained. Age of patients ranged from 32 to 82 years (Table 1). Mean age was 54.3 years. More than 56% patients were postmenopausal. In almost all patients presenting complaint was breast lump. Only one patient presented with reddish nipple discharge and was found to have small 1cm size breast lump (Table 1).

On clinical examination, size of breast lump varied from 1-10cms with mean size of 4cms (Table 2). In 31% patients lymph nodes were not palpable, 46% had discrete palpable nodes whereas 21% had fixed matted lymph nodes (Table 2). Among diagnostic pathological examination 90% cases were diagnosed by FNAC. 6.66% were diagnosed by Trucut biopsy. Rest 3.34% underwent lumpectomy and frozen section for confirmation (Table 3).

Of 60 patients, 52 underwent MRM (Table 4), 4 patients were given Neoadjuvant chemotherapy followed by MRM. Only 1 patient was subjected to Simple mastectomy that was diagnosed of insitu Ductal carcinoma. Three patients diagnosed with distant metastasis were subjected to palliative chemoradiotherapy.

After Histopathological and Immunohistochemistry study, patients were subjected to chemotherapy, hormonal therapy or radiation therapy. 54 (90%) patients had Invasive ductal carcinoma, 4(6.66%) had invasive lobular carcinoma, 1 patient had mixed ductal and lobular pattern. Only 1 patient had insitu ductal carcinoma (Table 5).

48(80%) patients were subjected to adjuvant chemotherapy. On basis of ER (35%), PR (21.66%) and Her-2-neu study, 21 hormone responsive patients were subjected to hormonal therapy. Only 13 patients required radiotherapy. Postoperative complications include lymphorrea 12(24%), flap necrosis 3(5%) and wound infection 1(1.66%).

Total 57/60 patients were on regular follow up over two years. We subjected patient to clinical examination 3 monthly, chest radiogram and ultrasonography abdomen every 6 monthly. In selected cases we referred patient for bone scan and/ PET scan. Of these 52(86%) had disease free survival. One patient had local recurrence and four had distant metastasis. Three patients were lost on follow up.

Table 1: Distribution of patients Age wise & according to presenting complaint

Age (years)	No. of patients (%)	Presenting complaint	No. of patients (%)
0-30	0	Lump	59(98.33)
31-40	9(15)	Pain	0
41-50	20(33.33)	Nipple discharge	1(1.67)
51-& above	31(51.66)	Retracted nipple	0

Table 2: Distribution of patients according to lump size and node involvement clinically

Lump size on clinical examination	No. of patients (%)	Lymph node	No. of patients (%)
< 1 cm	0	Non palpable	19(31.66)
1-2cms	1(1.67)	Palpable and discrete	28(46.66)
2-5cms	46(76.67)	Matted nodes	13(21.66)
>5cms	13(21.67)		

Table 3: Pathological Diagnosis and distribution of patients

Pathological investigation	No. of patients (%)
FNAC	54(90)
Tru-cut biopsy	4(6.66)
Lumpectomy	2(3.34)

Table 4: Management of patients

Management of patients	No. of patients
A: Surgical	
1.BCS	0
2.Simple Mastectomy	1
3.Modified Radical mastectomy	56
B: Chemotherapy	
1.Neoadjuvant	4
2.Adjuvant	48
C: Hormonal therapy	21
D: Radiotherapy	13
E: Palliative chemoradiotherapy	3

Table 5: Histopathological variety of carcinoma breast and Lymph node status on HPE

Histological variant	No. of patients (%)	No. of positive lymph nodes	No. of patients (out of 56 operated for MRM)
Insitu malignancy	1(1.66)	0	12
Ductal	54(90)	1-8	28
Lobular	4(6.67)	>8	16
Mixed	1(1.66)		

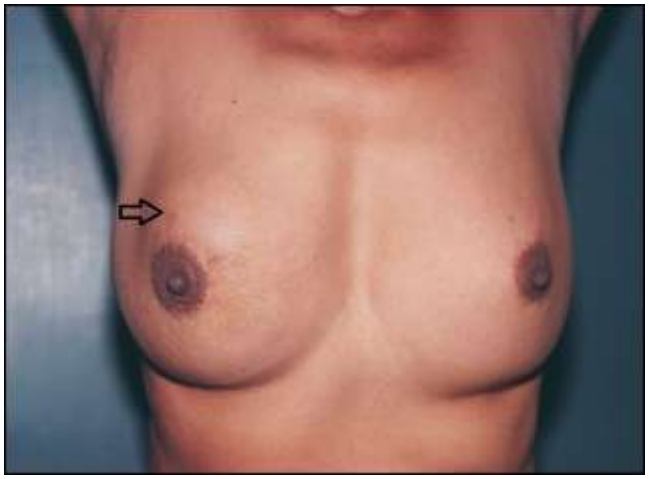

Fig. 1: Arrow pointing to the lump in upper-outer quadrant of Right breast

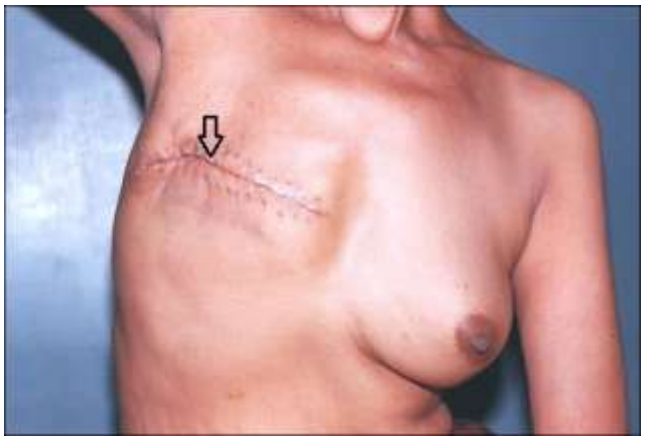

Fig. 2: Arrow pointing to the scar in operated case of Right Modified Radical Mastectomy

DISCUSSION

Breast cancer accounts for 19-34% of all cancer cases among women nationally [1]. As per the data from national and regional cancer registries, it is the commonest cancer amongst women in Delhi, Mumbai, Ahmedabad , Kolkata and Trivandrum [1].

In general, breast cancer has been reported to occur a decade earlier in Indian patients compared to their western counterparts. The median age at presentation was 54.3 years just higher than in other studies like Siddique *et al.* (48 years) [2] and Raina *et al.* (47years) [3]. The incidence rates in India begin to rise in the early thirties and peak at ages 50-64 years [1]. More than 80% of Indian patients are younger than 60 years of age. More than 56% patients were post menopausal in our study. The earlier published reports also show that the risk of breast carcinoma increases with increasing age of menopause, possibly because the women are exposed to hormones for a longer duration [4].

As mammographic facilities are not widely available here and there is no nation-wide breast-screening program, the commonest mode of presentation remains a lump in the breast. Lump in the breast was the chief presenting complaint in a majority of the patients (96.67%), as reported in various studies [3, 5]. Only one patient presented with nipple discharge and had a lump on examination. None had isolated complaint of nipple discharge or pain in the breast.

Women often do not present for medical care early enough due to various reasons such as illiteracy, lack of awareness, and financial constrains. The majority of the patients seek medical advice when the disease is fairly advanced. Almost 80% of patients present with lump size more than 2cms [2]. Almost 70% patients had clinically positive nodes. Early Breast Cancer constitutes only 30% of the breast cancer cases seen at regional cancer centers in India [6] whereas it constitutes 60-70% of cases in the developed world [7].

On diagnostic pathological examination, FNAC was diagnostic in 90% of the cases as in other studies which showed almost 95% sensitivity and specificity [7, 8]. 6.66% patients were diagnosed by Trucut biopsy and 3.34% had to undergo lumpectomy for pathologic confirmation.

Surgery formed the principle mode of therapy, while chemotherapy, radiotherapy, and hormone therapy were used in the adjuvant setting. Popularity of BCS is increasing in the western world [9-11]. As per some recent reports, BCS has become the preferred method of treatment for many patients [10, 11]. The reasons supporting this conservatism are (1) earlier diagnosis through mammographic screening, (2) development of image-guided Core Needle Biopsy, and (3) advent of state-of-the-art Radiotherapy Units [5]. However, in our study none of the patients underwent BCS because patients were reluctant for conservative surgery and radiotherapy. Patient preference for mastectomy is also an important reason for the under-utilization of breast conservation therapy. MRM after or without neoadjuvant chemotherapy (NACT) is the norm in most centers.

Postoperative morbidity was seen in the form of lymphorrhea / seroma (24%), flap necrosis (5%), and wound infection (1.66%), which was comparable with the reports in the literature [12-14]. Literature also supports that the major factor predicting lymphorrhea was the number of positive lymph nodes isolated and indirectly indicates a more complete axillary dissection, which is an important prognostic indicator in cases with breast carcinoma [15]. Neoadjuvant chemotherapy was given in 4(6.67%) patients for downstaging the disease.

In our study 54(90%) patients had Invasive ductal carcinoma, 4(6.67%) had invasive lobular carcinoma. Only 1 patient had ductal carcinoma insitu. Our study as well as reports from India and the western world indicate that IDC is the most commonly encountered histopathology [6, 16]. Ductal carcinoma *in situ* (DCIS) accounts for over 20% of the breast carcinoma cases in the western world, due to early detection by screening [17**]**. However, in developing countries like India, most patients present late, due to lack of screening programs, leading to a very low incidence of DCIS. A majority of the patients present with LABC, in accordance with other reports from India [18].

Estrogen (ER) and progesterone receptors (PR) are found positive in only 21–35% of Indian patients. ER-positive rates were reported to be lower in Indian patients than those in western countries. In previous two studies from India by Raina *et al*. [19] and Redkar *et al.* [20], ER positivity was shown to be 50.5% and 43.9%, respectively. At least 60-80% of the patients are found to be ER-positive in the studies reported from Europe and America [21]. These differences in receptor distribution between Indian and Caucasian patients might be attributed to either lower average age at diagnosis of Indian patients or real racial differences.

Very few patients accept/demand post-mastectomy reconstruction, because the reconstructive procedure is seen as an unnecessary burden on the scarce financial resources, and undue prolongation of the treatment. In the follow up period from minimum 6 months to maximum 2 years, 52(86.66%) remained disease free, 1 had locoregional recurrence while 4 developed distant metastasis. 3 patients were lost on follow up.

CONCLUSION

Breast cancer is a major public health problem in India. Late presentation is a major concern. Although

BCS is gaining popularity worldwide, MRM still remains the gold standard for the management of breast carcinoma in the present circumstances, in most parts of India. Comparable results with other developed centers can be obtained even in a newly started setup with facility of necessary investigations and availability of radiotherapy center in the vicinity.

Abbreviations: BCS : Breast conserving surgery, DCIS : Ductal carcinoma in situ, FNAC : Fine Needle Aspiration, Cytology, ER : Estrogen receptor, HPE : Histopathological Examination, IDC : Invasive Ductal carcinoma, LABC : Locally advanced breast carcinoma, MRM : Modified Radical Mastectomy, NACT : Neoadjuvant chemotherapy, OPD : Outdoor Patient Department, PET Scan : Positron Emisson Tomography, PR : Progesterone receptor, TNM : Tumour, Node & Metastasis

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