

Early diagnosis and management of carcinoma breast outcome - A tertiary care hospital study experience

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Abstract

Background: The aim of this study is to evaluate evaluate the clinical presentation and clinical stage at the time of presentation of breast cancer. In India, breast cancer is the second most common malignancy among women next to carcinoma cervix. Since it presents as a painless lump patient often neglect and present to hospital late. With increasing prominence and greater visibility in country specific health profiles around the world, breast cancer and its prevention detection and treatment will continue to emerge as a major priority and challenge for health system. With the suggestion that the behavior of a breast cancer is often the expression of systemic disease present at the time of diagnosis, surgical management of the local disease has become more conservative. As carcinoma of breast is a quite common clinical problem encountered in clinical practice, this study is an attempt to study clinical presentation modes of management of the disease.

Methods: We conducted a prospective study of 50 patients who are admitted with a diagnosis of carcinoma breast were studied through history taking, clinical

examination, relevant investigations depending on the stage of the disease. After completion the results were analyzed and are compared with other studies.

Results: Total 50 confirmed cases of carcinoma breast were studied. Study was descriptive type which emphasized on clinical evaluation and treatment. Majority of patients belonging to age group 41-50 years (42%) with lump as major complaint at the time of presentation (78%). Disease in most patients was on left side (60%) and upper outer quadrant (78%). Majority of patients belong to stage II (84%) of the disease clinically. All patients treated with MRM and IDC-NST (72%) was the most common HPE subtype.

Conclusions: Among 50 patients studied in this series, the presentation is decade earlier than western series with an increase in incidence among age group 41-50 years. Majority of patients belongs to upper lower socioeconomic status. Most of the patients present with lump of size 2-5 cm in breast located in upper outer quadrant. The patients in our hospital presents earlier due to awareness and education among working population about the disease. Maximum number of cases

were of infiltrating ductal carcinoma no specific type. The simple and effective methods of detecting the disease early like self-breast examination, clinical breast examination, FNAC should be made aware among the people for early detection and effective treatment of the disease. Key words: Carcinoma breast, Fine needle aspiration Cytology, Histopathology

Keyword: Malignancy, Socioeconomic, Belonging

Introduction

The cancer of breast with its uncertain cause has captured the attention of physicians throughout the ages. It is one of the most common carcinoma occurring in female and it is a devastating illness both physically and mentally.

In India, breast cancer is the second most common malignancy among women next to carcinoma cervix. Since it presents as a painless lump patients often neglect and present to hospital late.

With increasing prominence and greater visibility in country specific health profiles around the world, breast cancer and its prevention, detection and treatment will continue to emerge as a major priority and challenge for health systems.

In the past 60 years the principles of surgical management of breast cancer have undergone an enormous change. With the suggestion that the behavior of a breast cancer is often the expression of systemic disease present at the time of diagnosis, surgical management of the local disease has become more conservative.

As carcinoma of breast is a quite common clinical problem encountered in clinical practice, this study is an attempt to study clinical presentation modes of management of the disease

In any patient who presents with a breast lump or other symptom suspicious of carcinoma, the diagnosis should be made by a combination of clinical assessment, radiological imaging and a tissue sample taken for cytology or histological analysis.

Modern therapy has evolved to include both surgical resection for localized disease and medical therapy for systemic disease. Randomized trials demonstrated the equivalence of modified radical mastectomy and radical mastectomy which lead to abandonment of more radical procedures. Six prospective trials showed there was no survival advantage for mastectomy over breast preservation.

Current recommendation for treatment of operable advanced loco-regional breast cancer is neo adjuvant chemotherapy with doxorubicin containing or taxane containing regime followed by modified radical mastectomy or lumpectomy with axillary lymph node dissection, if necessary, followed by adjuvant radiation therapy.

Neo adjuvant chemotherapy (NAC) the delivery of systemic chemotherapy prior to surgical resection, has emerged as the preferred initial component of therapy for patients diagnosed with Locally advanced breast cancer in an effort to enhance the prospect of breast-conserving surgery and to render inoperable tumors resectable.

The current trend in the management of breast cancer is towards breast conservation wherever possible. With the increasing use of neo adjuvant chemotherapy (NACT), this is becoming a distinct possibility for larger tumors as well. Neo adjuvant chemotherapy is the standard treatment for locally advanced breast cancer

The gradual shift from radical surgery towards breast and soft tissue preservation was influenced by larger

trials. These studies gave rise to the concept of breast-conserving treatment (BCT), which refers to wide excision of the cancer, leaving the breast largely intact with or without post-surgical irradiation and with or without axillary node surgery. NSABP B-06, Milan Cancer Institute trial, National Cancer Institute trial, Danish Breast cancer group trials were a few of the studies which compared the concept of breast conservation with mastectomy.

Methods

It is a prospective study conducted for all clinically diagnosed 50 consecutive patients who are clinically diagnosed breast lump with positive FNAC for malignancy at ESIC-MH & PGIMSR RAJAJINAGAR BANGALORE -10 in the period of 18 months from January 2016 to June 2017.

The sample size calculation was done using open epi software 2.3.1 version.

Formula used - $\frac{DEFF \times N_p(1-P)}{[d^2/Z^2_{1-\alpha/2}] \times (1-N) + p(1-p)}$

N- Infinite population

P – 8.6% Absolute error (d) -7% Sample size – 50

Method of Collection of Data

All the relevant details of the patient will be collected in structured proforma. Findings of all thorough clinical examination, radiological and laboratory investigations will be entered into the proforma.

Inclusion Criteria

- 1) Female patients aged between 20 to 80 yrs.
- 2) All patients with palpable breast lumps and NAC positive reports for carcinoma.

Exclusion Criteria

Patients with benign breast diseases

1. Recurrent breast carcinoma
2. Male patients diagnosed with carcinoma breast

Descriptive statistics comprising mean, average, standard deviation, proportion and percentage shall be used. Data will be entered on Microsoft excel for analysis will be done by using SPSS software version 16 The following investigations done after obtaining written consent from the patient.

Routine investigations

1. Hemoglobin percentage
2. Total WBC count
3. Differential WBC count
4. Erythrocyte sedimentation rate
5. Platelet count
6. Bleeding time
7. Clotting time
8. Urine for protein, sugar and microscopy
9. Random blood sugar
10. Blood urea
11. Serum creatinine
12. Electrocardiogram

Specific investigations

1. Fine needle aspiration cytology
2. Ultrasound breast / Mammography
3. Post-Operative Histopathology Report with hormonal receptor status
4. Chest x-ray PA view
5. Ultrasound Abdomen and Pelvis
6. Liver function tests
7. Alkaline Phosphatase levels
8. Bone scan /x-ray long bones and spine
9. Pet CT/ onco CT
10. Trucut /core biopsy

Intervention

1. Surgical intervention depending on the stage of disease.

2. Neoadjuvant chemotherapy and chemotherapy radiotherapy hormone therapy.

The cases were followed up till the end of the study, which includes clinical examination for recurrence of tumor at the operated site recurrence in axilla, post operative complications like lymphedema. Patients who complained of symptoms of metastasis were investigated to find the metastasis. After completion of the study findings were analyzed and compared with other similar studies.

Results

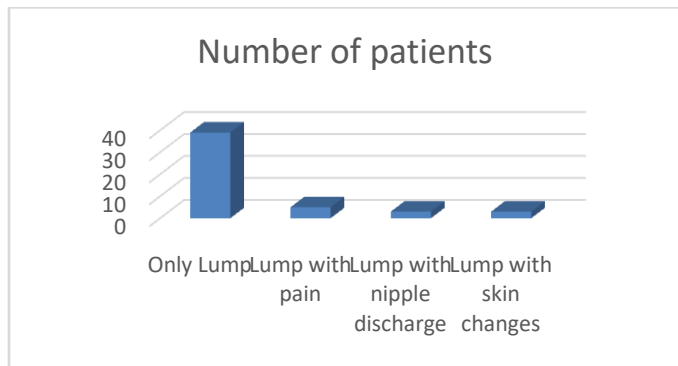
Between January 2016 to June 2017, 50 consecutive patients with diagnosed breast lump with positive FNAC for malignancy fulfilling the inclusion and exclusion criteria were treated with the multimodal treatment approach depending on the stage of disease.

Table 1: Age incidence

Age	No of patients	Percentage
30-40	10	20%
41-50	21	42%
51-60	12	24%
61-70	6	12%
71-80	1	2%
Total	50	100

Majority of patients belong to age group 41-50 years. Youngest patient is 30 years and oldest was 71 years.

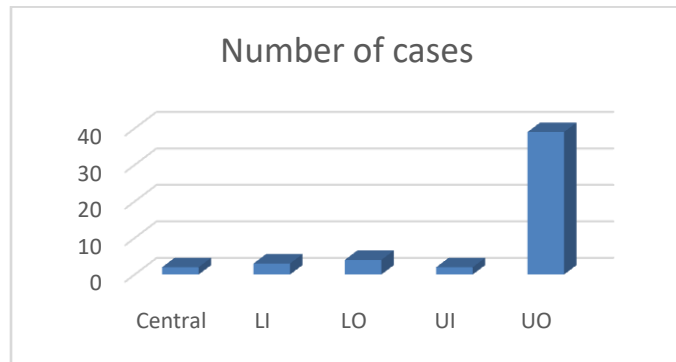
Graph 1: Complaints



Lump in the breast was the main complaint, next common was lump with pain. A significant number of

patients also presented with complaints of lump with nipple and skin changes

Graph 2: Site



Though in majority of patients tumor had extension to more than one quadrant, the quadrant which has majority of the tumor was taken into consideration.

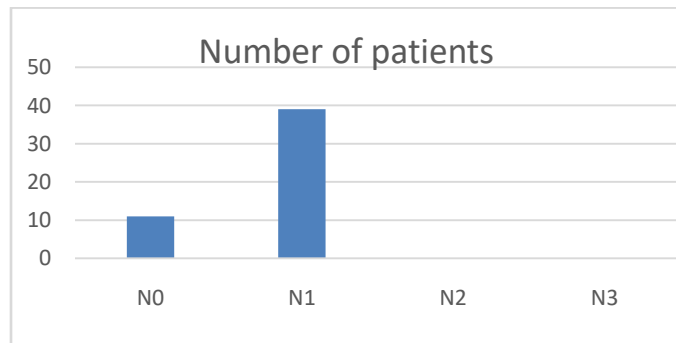
Majority of tumors were seen in upper outer quadrant accounting for 78% of cases.

Table 2: Size of the tumor

Size of the Lump	Number of patients	Percentage
>5	4	8%
2-5	46	92%
<2	0	0%

Size of the tumor is an important prognostic factor in carcinoma breast. In our study none of the patients had tumor size less than 2cms, 46(92%) of 50 patients had tumor size between 2 to 5 cms, 4(8%) of 50 patients had tumor size more than 5cms.

Graph 3: Lymph node status



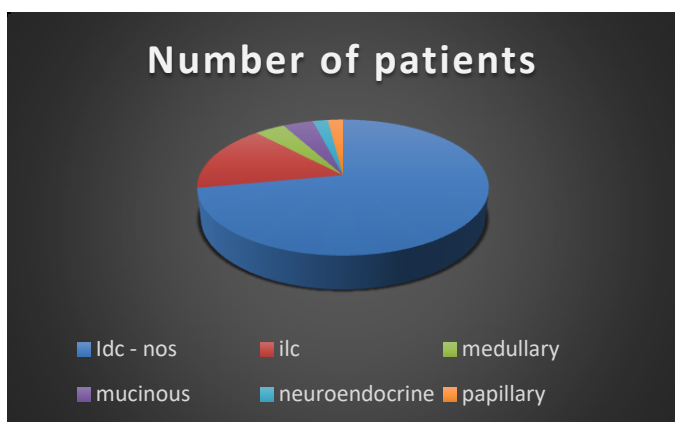
Out of 50 patients 39 patients had clinically palpable axillary lymph nodes out of which all patients had N1 disease. There were no cases of N2 or N3 disease.

Table 3: Clinical stage

Stage of the disease	Number of patients	Percentage
I	0	0%
IIA	11	22%
IIB	31	62%
IIIA	2	4%
IIIB	3	6%
IV	3	6%

In present study 42(84%) of 50 patients belong to stage II disease, 5(10%) patients belong to stage III disease, 3(6%) patients belong to stage IV disease. There were no patients belonging to stage I disease

Graph 4: HPE types



All patients with the diagnosis of carcinoma breast were confirmed histopathologically post operatively after operative procedure.

Among the cases studied majority of patients i.e. 36(72%) of patients has Infiltrative ductal carcinoma non specific type (Idc-NST), 8(16%) patients have Invasive lobular carcinoma (ILC), medullary and mucinous type has 2(4%) patients each, papillary and neuroendocrine types comprised 1(2%) each.

Discussion

In our study majority of patients belong to age group between 41-50 years the average age of patients affected

was 49.34 years which is in concordance with age of 45.8 years quoted by Haque et al.⁷ the age group 41-50 years consists of 42% of cases which is higher compared to study conducted by R.K Gang et al⁸ and A.K. Sen and T.K. Das Gupta.⁹

In the present study lump in the breast was the presenting complaint in majority of patients i.e 78% of cases, also patients presented with lump with pain in 10% of cases, lump with nipple changes in 6% of cases, lump with skin changes in 6% of cases.

Gang et al⁶⁵ had 74% painless lumps, 13.89% painful breast lumps, 5.78% nipple changes and 6.48% skin changes. Yorkshire series¹⁰ had 84% painless lumps, 5% with pain, 21% with nipple changes with no skin changes

In our study upper outer quadrant was the most commonly involved site accounting for 78% of cases, in Gang et al⁸ series upper outer quadrant accounts for 48% of cases, Marshal and Higginbotham¹¹ shows similar range of results.

In the present study no case belongs to stage I, majority of patients belong to stage II followed by stage III and stage IV respectively. In case series of Gang et al⁸ majority of cases were in stage III and also they had distribution of cases among other stages also.

Conclusion

This study conducted in ESI Medical College, Rajaji Nagar, Bengaluru, presents series of 50 cases of carcinoma breast. The presentation is decade earlier than western series with an increase in incidence among age group 41-50 years. Majority of patients belongs to upper lower socioeconomic status. Most of the patients present with lump of size 2-5 cm in breast located in upper outer quadrant. The patients in our hospital presents earlier due to awareness and education among working

population about the disease. Maximum number of cases were of infiltrating ductal carcinoma no specific type, Even though there has been significant improve in the management of the disease, the increasing trend of breast conservation therapy in the earlier stages of the disease is not yet practiced everywhere and is made available to the patients in earlier stages of the disease. In advanced cases neo-adjuvant chemotherapy followed by surgery yield better results.

The simple and effective methods of detecting the disease early like self-breast examination, clinical breast examination, FNAC should be made aware among the people for early detection and effective treatment of the disease.

Among post-operative complications seroma forms the major percentage followed by surgical site infections.

No significant association between the age group, menarche, menopause HPE subtype noted.

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