ORIGINAL ARTICLE

Carcinoma of breast, pattern and presentation in developing countries

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Abstract:
Objective: To determine the frequency of stage III & stage IV breast carcinoma due to their late presentation and Create "awareness" for "users" and "providers".
Design: Cross Sectional Study
Setting and duration: This study was conducted in the Department of General Surgery, Unit-III, Ward-26 of Jinnah Postgraduate Medical Centre, Karachi between November, 2008 to October, 2010.
Methodology: A total of 100 patients of carcinoma of breast were included on the basis of their clinical examination, radiological findings and histopathology. Staging was done after metastatic workup.
Results: A break up of 100 patients of breast carcinoma is presented. Out of which 67% were presented in 5th decade of life. The tumour size was more than 5cm in 40% of cases. The commonest quadrant involved is upper outer quadrant (68%). Axillary lymph nodes was positive in 90% of cases. Sixty seven percent cases were labeled as stage-III and 27% were labeled as stage-IV.
Conclusion: Due to lack of awareness and limited resources, patients presented in tertiary care hospital in late stage. Lack of health education, unawareness about the disease and misconcepts about the treatment result in advanced disease.

Keywords: Carcinoma of breast, Staging, Screening

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Introduction:

Breast carcinoma is the most common cancer in women in most parts of the world, but there is marked geographical variation in the incidence in different countries. The incidence is highest in Northern Europe and North America, Intermediate in Mediterranean countries and South America, and lowest in Asia and Africa.[1] Breast cancer in the developing world including our country, present in advanced stage which leads to higher percentage of mortality and morbidity.

Major success in survival figures of breast cancer are outcomes of early diagnosis coupled with comprehensive care through multidisciplinary services. The incidence of breast cancer is rising worldwide probably due to increase in aging population and earlier detection of breast cancer due to newly developed techniques of FNAC, ultrasound and stereotactic FNAC.[2]

The new millenniums still find breast cancer as a leading cause of cancer related, death in females.[3]

The incidence of breast cancer in Pakistan stands at 24.4%, thus making it the commonest malignancy among Pakistani females.[4] The incidence in NWFP is 20.8%.[5]

In the western countries the situation has been changed now and the incidence and mortality have started decreasing due to cancer control programmes and prevention efforts in their

community. Among this, breast self examination (BSE), clinical breast examination (CBE) and mammography are important early diagnostic tools.[6]

The advent of successful breast screening programmes has resulted in a higher rate of abnormal mammographic findings. This translates into the more frequent detection of early impalpable breast cancers.[7]

Carcinoma of breast is potentially curable disease when treated at early stage, which is still confined to the breast, but when it involves the regional lymph nodes, the survival rate will be less and once it spreads beyond regional lymph nodes, cure became impossible.[8] Metastatic breast cancer is essentially incurable disease inspite of the clinical benefits of chemotherapy. With standard therapy such women have a median survival of the two years after documentation of metastasis. In Pakistan multicentric studies have revealed that breast cancer is the most common malignant tumour and accounts for approximately 25% of all malignant tumors in the female population.[9]

This study was conducted to evaluate the clinical presentation of carcinoma of breast in tertiary care hospital of a developing country.

Methodology:
This cross sectional study was conducted in the Department of General Surgery, Unit-III, Ward-26, Jinnah Postgraduate Medical Centre, Karachi between November, 2008 to October, 2010. In this study we included those patients who presented with carcinoma of breast of above 20 years of age. Patients with recurrence were excluded from the study. They all were diagnosed by triple assessment. Informed consent was taken. All patients were admitted through outpatients department. After diagnosis, patients were staged and managed accordingly.

Statistical analysis:
The database was developed on SPSS version 13.0. The frequencies of different stages of breast cancer are presented by their numbers along with percentages. Age and tumor size are stratified into groups. Individual age of patient is presented by mean ± S.D values. Lymph nodes and quadrants are presented by their frequencies.

Results:
In this study we concentrated on five parameters i.e. age of patients, size of tumour, lymph node status, stage of disease and quadrants of breast involved. The study comprises of 100 cases of breast carcinoma. Maximum numbers of patients were presented in 40 – 50 years age group (table-1). Tumour size was <2cm in 6 cases, 2 – 5cm in 20 cases, > 5cm in 47 cases and any size but fixed to skin / chest wall in 27 cases (table-2).

According to stage of the disease,6% cases presented in stage I, 20% cases in stage II out of which 4 cases presented with no axillary lymph node involvement (IIa) and 16 cases presented with positive axillary lymph node (IIb). 47% cases presented in stage-III and 27% cases presented in stage-IV with local advancement and distant metastasis. The presentation of breast carcinoma in upper outer quadrant is maximum 68%, in upper inner quadrant it was 6%, in lower inner quadrant it was 1%, in lower outer quadrant it was 5% and in central retroareolar part it was 20%. Axillary lymph nodes were positive in 90% cases.

Discussion:
A number of studies have been published regarding breast cancer in Pakistan[10,11]. It is now well known that the prognosis and biological behavior of breast carcinoma is determined by certain factor such as age of the patient, size of tumour, grade of tumour, histological type, lymphnode metastasis, hormone receptor status and a number of immunobiological markers.[12]

About 12% palpable lumps presenting in breast cancer are neoplastic.[13] Majority of them present as a locally advanced disease in this part of world[14] Teaching breast self examination is extremely important along with mammographic facilities to overcome this delay in diagnosis. In this study we have concentrated on certain basic

Table 1: *Age group*

Age in years	No. of patients	Percentage
31 – 40	03	3%
41 – 50	67	67%
Above 50	30	30%

Mean age: 48.2 ± 3.3 years

Table 2: *Size of tumour*

Stage	No. of patients	Tumour size	Lymph node status	Percentage
I	6%	<2cm	-ve	6%
II	20%			20%
IIa	04%	2 – 5cm	-ve	4%
IIb	16%	2-5cm	+ve	16%
III	47%	>5cm	+ve	47%
IV	27%	Any size	+ve	27%

parameters including patient age, tumour size, lymph node status, stage of disease and quadrants of breasts involved.

The majority of breast carcinoma in the western countries are seen in post menopausal women and the mean age is 54 years.[15] In our study significant number of patients were between 40 - 50 years of age (67%) and 30% of the patients fall in > 50 years age. More or less similar figures regarding age have been reported by other studies from different parts of the country.[4] A young age group and late stage at presentation was similarly reported in Thailand,[16] and other developing countries i.e. Iran[17] and Mexico.[18]

The cause of the delay in presentation is multifactorial and further research into the health seeking behavior of women with breast complains is required. While prevention is not applicable for this entity, early diagnosis is the key for better survival.[19]

Another prognostic feature is the size of tumour. Breast carcinoma, which are greater than 2cm are associated with the relatively poor prognosis as compared to those less than 2cm in size.20 In present study majority of breast carcinoma (96%) were more than 2cm in size with axillary lymph node involvement in 90% whereas in UK 30% of women presenting with large tumour (>3cm) and 15% have locally advanced breast cancer.[21] This observation reflects that the greater the size of the tumour the more the lymph nodes will be involved resulting in worsening of their prognosis.

According to the American College of Surgeons National Cancer Database, approximately 6% of breast carcinoma in U.S. present as stage III,[22] whereas in our study it is 45%.

The prognosis of breast cancer is extremely good if it is confined to ducts and has no invasive component.[23]

Conclusion:

We conclude that late clinical presentation of carcinoma of breast is because of lack of health education, unawareness about the disease ,misconcepts about the treatment and strong belief in traditional medicine resulting in advanced disease. This is worsened by poverty and unavailability of health care services especially in rural areas.

So we are unable to perform modern surgical techniques like breast conservation.

We suggest for early diagnosis and treatment of carcinoma breast, purpose built breast clinics and screening programme should be started in all hospitals. Social awareness programmes to find the prevalence of disease and spread knowledge in masses about the early detection.

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