

# Stage of Carcinoma Breast at Presentation in a Tertiary Care Hospital of Rawalpindi

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## ABSTRACT

**Aim:** To determine the commonest stage of ca breast at presentation in a tertiary care hospital.

**Material and methods:** This prospective study was conducted in the Department of Surgery, Fauji Foundation Hospital Rawalpindi from 1<sup>st</sup> March 2009 to 28<sup>th</sup> February 2010. 120 patients were included by non-probability convenience sampling. Only female patients with histological proof of carcinoma breast were included in the study. Male patients, patients with recurrent disease and those who refused to give consent were excluded from the study.

**Results:** Mean age was 53.22 years. 92% of the patients were between the ages of 41 to 60 years. Duration of symptoms ranged from 2 months to 2 years. 58 patients were in stage 2 of malignancy while 46 were in stage 3. 16 patients had metastatic disease.

**Conclusion:** Less than 50 % of patients presented to the hospital for definitive treatment with stage 2 disease. Majority of patients of carcinoma breast had stage 3 or 4 with high morbidity and mortality rates and poor prognosis. It is recommended that all the females above the age 40 years with lump breast should be seen by a surgeon and investigated to rule out carcinoma breast so that these patients diagnosed at an early stage.

**Keywords:** Staging, invasive ductal carcinoma, carcinoma in situ, metastatic breast disease.

## INTRODUCTION

Carcinoma breast (Ca Breast) is the most commonly diagnosed cancer among female population<sup>1</sup>. The world burden of breast cancer is one million women newly diagnosed each year<sup>2</sup>. This rise in numbers suggests increased detection due to improved awareness of breast diseases among female population<sup>3</sup>. It is also the commonest malignancy affecting females in Pakistan as in the rest of the world<sup>4</sup>. Approximately one in every 9 Pakistani women is likely to suffer from breast cancer which is one of the highest incidence rates in Asia<sup>5</sup>.

Early marriages, genetic predisposition and hormonal imbalance, use of oral hormonal contraceptives, prolonged hormonal replacement therapy, environmental hazards and parity are considered to play an important role in causation of carcinoma breast<sup>6</sup>. However breast cancer occurs in Pakistani women with no recognized major risk factor<sup>7</sup>.

The patients with breast carcinoma commonly present with lump, peau'd orange, nipple retraction, nipple discharge, pain, fungation and ulceration of skin<sup>8</sup>, with painless lump being the most common presentation<sup>4,9</sup>. The patients may also present with metastatic disease to axilla<sup>1</sup>, lungs, liver, bones or brain. Despite advances in diagnostics modalities most of the patients are diagnosed at advanced stages of breast cancer due to delayed presentation<sup>4,10</sup> associated with poor socio-economic conditions, ignorance and shyness<sup>11</sup>.

Staging of breast cancer by means of TNM (tumor, nodes, metastasis) or UICC (Union Internationale Contre le Cancer) criteria is used less often now as we gain more knowledge of the biological variables<sup>12</sup>. One of the pragmatic classification of ca breast is tumor less than 5 cm with node negative and well differentiated are low risk patients (5 year survival, 70-90%). High risk patients are node positive or unfavorable histology with 5 year survival rate is less than 70%. Large primary or inflammatory ca got 5 year survival less than 30%<sup>12</sup>. Other important widely used and simple system is Manchester Staging System<sup>2</sup>.

## PATIENTS AND METHODS

This prospective study was conducted in the Department of Surgery, Fauji Foundation Hospital Rawalpindi from 1<sup>st</sup> March 2009 to 28<sup>th</sup> February 2010. Written permission was taken from the ethical committee of hospital as well as from the patients. 120 patients were included by non-probability convenience sampling. Only female patients with histological proof of carcinoma breast were included in the study. Male patients, patients with recurrent disease and those who refused to give consent were excluded from the study. All the pertinent details regarding patients profile including name, age, presenting complaints and duration of symptoms were noted. Thorough clinical examination was done to assess the tumor site, size, surface, consistency, skin changes, nipple retraction, lymph node status and distant metastasis. Findings were meticulously recorded in proforma after obtaining informed written consent from the patient. Confidentiality of the data obtained was maintained. The data was analyzed by using SPSS version 15. The mean±S.D. were calculated for numerical variables. One-Way ANOVA test was used to compare size of tumor with respect to duration of symptoms and involvement of lymph nodes. Chi-square test was used to find out association of duration of symptoms with skin changes and stage of breast carcinoma. A P-value of <0.05 was considered statistically significant.

## RESULTS

The duration of symptoms at the time of presentation ranged from 2 months to 2 years. Mean duration was 12.67±11.91 months. Forty-five percent patients (total 54) presented within 6 months of onset of symptoms as shown below in table 1. In 75% patients, presenting symptom was presence of a painless lump. 36% patients presented with ulcer. Later on examination revealed that all the patients had a lump underlying the ulcer. Other symptoms like nipple discharge and weight loss were also noted. 20% had history of weight loss and 8.3% had jaundice.

Left breast was involved by the tumor more than the right. There was no case of bilateral disease. Out of 120 patients, 72 patients presented with left sided disease whereas 48 patients got tumor in the right breast. The most common area involved was upper outer quadrant of breast. 6 patients had involvement of the whole breast. There was sub areolar tumor in 6 patients. The other areas involved are shown in the table 3 below.

Most patients presented with a hard lump. Only 10 presented with a firm mass and none of the patient presented with soft mass. Majority of patients in this study had tumors which were mobile on the underlying surface whereas 7 tumors were fixed to the deeper structures. In 58 patients there was involvement of skin by the tumor. In all 58 patients, there was peau'd orange along with varying combination of ulceration. The size of tumor ranged from 1 to 20 cm. Mean size was 5.72±3.22. There were 58 patients who had skin involvement at the time of presentation and thus fell in T 4 subgroup which appeared as the largest sub-group. There were no patients with a tumor less than 2 cm.

Forty six of our patients presented with palpable axillary lymph nodes. 10 patients had fixed axillary lymph nodes on palpation. 2 patients presented with palpable ipsilateral supraclavicular lymph node. In 64 patients, clinicians were not able to palpate any nodes. Large number of patients in this study presented with locally advanced breast cancer followed by cases of early breast cancer. There were 16 cases of metastatic breast cancer. None of the patient presented with stage I disease. Stage groups and subgroups are shown in tables 6 & 7 below.

Table1:

Duration	Frequency	%age
Up to 6 months	54	45
6-12 months	32	26.7
More than 12 months	34	28.3
Total	120	100

Table 2: Quadrant involved

Quadrant	=n	%age
Upper Outer	76	63.3
Upper Inner	10	8.3
Lower Outer	8	6.6
Lowe Inner	12	10%
Sub areolar	6	5%
Upper half	2	1.6

Whole breast	6	5
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Table 3: Size of the tumor:

Size	=n	%age
T 0	0	0
Tis	0	0
T 1	0	0
T 2=2-5 cm	30	25
T 3=>5 cm	32	26.7
T4=any size with skin involvement	58	48.3

Table 4: TNM groups.

Group	Patients	Stage
T2N0M0	20	IIA
T2N10	8	IIB
T3N0M0	28	IIB
T3N1M0	2	IIIA
T3N2M1	2	IV
T4N0M0	26	IIIB
T4N1M0	16	IIIB
T4N2M0	4	IIIB
T4N2M1	4	IV
T4N1M1	8	IV
T4N3M1	2	IV

Table 5: Subgroups of stages

Stage	=n	%age
II A	20	16.7
II B	36	30
III A	2	1.7
III B	46	38.3
IV	16	13.3

## DISCUSSION

The duration of symptoms at the time of presentation ranged from 2 months to 2 years. Mean duration was  $12.67 \pm 11.91$  months. Forty-five percent (45%) patients presented within 6 months of onset of symptoms which is consistent with the study by Isaac U, Memon F, and Zohra N<sup>11</sup>. Carcinoma breast was relatively more common in left breast in our study. There was no case of bilateral disease. There were 48(40%) patients in this study who had involvement of right breast whereas in 72(60%) patients left breast was involved as is also shown by various authors including Qureshi J N, Qureshi ZA, Arm P, Memon AS<sup>13</sup>.

In our study, carcinoma breast is more common in upper outer quadrant. 76(63.3%) patients in this study had involvement of upper outer quadrant. 6 patients (5 %) had involvement of the whole breast. These results were comparable to the studies by Baloch TA, Iqbal P<sup>14</sup>. Isaac U, Memon F, Zohra N<sup>11</sup>.

Presence of lump is the most common presentation of carcinoma breast. In 90(75%) patients presenting symptom was presence of a painless lump whereas 30 patients (25 %) presented with ulcer. In all 58 patients, there was peu d' orange along with varying combinations of ulceration, skin fixity, tethering and nipple retraction. These results are comparable to local studies by Baloch TA, Iqbal P<sup>14</sup>, Gardezi J<sup>15</sup>, Isaac U<sup>11</sup> and Qureshi J N et al<sup>14</sup>.

106 patients (88.3%) in this study had tumors which were mobile whereas 14 tumors were fixed to the deeper structures. Locally advanced breast cancer involves the skin. There were 58 patients (48.3 %) fell in T4 subgroup which appeared as the largest subgroup comparable to reported by Qureshi S, Memon Attaullah<sup>8</sup>. Quraishy et al<sup>16</sup>, Aslam MN, Ansari AK, Siddique A, Imran M<sup>17</sup>. Fifteen patients (25%) had T 2 tumors and 16 patients (26.7%) had T 3 tumors. Khanam A. et al reported T3 tumor in 47.22%. There were no patients in the T0, Tis, and T1 groups<sup>18</sup>. The size of the tumor has a direct relationship with overall prognosis<sup>19</sup>. Tumors less than 2cm have a favorable prognosis. Women,

regardless of their age, with tumors less than 5cm generally do better compared with women with tumors < 5cm<sup>20</sup>.

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