

# Profile of Breast Cancer Patients

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## ABSTRACT

*Objective* To report the profile of patients with breast cancer.

*Study design* Cross sectional study.

*Place & Duration of study* Department of General Surgery, Dow University of Health Sciences Civil Hospital and Bantva Hospital Karachi, from March 2007 to February 2010.

*Methodology* Diagnosis was based on history, clinical examination, Trucut biopsy, FNAC, excision biopsy, frozen sections where applicable. Surgical procedure was tailored according to disease related variables. Induction chemotherapy was given to the patients who present with advance disease, while adjuvant chemotherapy was used in patients with early tumor. Data was collected and recorded; SPSS version 16 was used to analyze the data.

*Results* This study included 105 patients. Mean age of the patients was 41.9 year. Majority of the patients were with tumor in advance stage. There were 61 (58%) patients in stage III, while 25 were in stage IV (23.8%). Distant metastases were found in bones (n=16), lungs (n=6) and liver (n=3). Modified radical mastectomy and axillary clearance was performed in 70 (66.6%) patients. Modified radical mastectomy and axillary sampling was done in 18 (17%) patients. Histopathology confirmed invasive intraductal carcinoma in 99 (94%) cases.

*Conclusions* Majority of the patients present late with advance disease in younger age group. Modified radical mastectomy was the operative procedure performed in most of the patients.

*Key words* Carcinoma breast, Epidemiology, Mastectomy.

## INTRODUCTION:

The most prevalent cancer in the world is the breast cancer. Breast cancer in Asian population results in nearly 40,000 deaths per year. Approximately 1 in 9 of Pakistani women will suffer from breast cancer at some stage in their lives.<sup>1</sup> At least 90,000 women suffer from breast cancer in Pakistan every year. The frequency of breast cancer in Karachi was 69.1 per 100,000 from 1998-2002.<sup>2</sup> Breast cancer accounts for one third of all cancer cases followed by oral cavity and ovarian cancers.<sup>3</sup>

Despite all advances, the management of breast cancer is still a controversial. This obviously is the

reason why it continues to be the focus of intense basic and clinical research. This study was carried out to report the profile of breast cancer patients.

## METHODOLOGY:

This cross sectional study was conducted from March 2007 to February 2010 in a surgical unit at Civil Hospital and Bantva hospital Karachi. All patients with confirmed carcinoma breast on cytology or histopathology were included.

Data included detailed history, examination of both breast and axillae, cervical and supraclavicular group of lymph nodes. Ultrasound breast was used in young patients while mammogram in patients above thirty year of age. Diagnosis was confirmed by fine needle aspiration cytology (FNAC), Trucut biopsy, excision biopsy, and frozen sections.

Modified radical mastectomy along with axillary clearance were performed in majority of cases.

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Mastectomy and axillary sampling in patients without palpable lymph nodes. Simple mastectomy was performed for advance tumor after induction therapy for palliation. Induction or neoadjuvant chemotherapy (adriamycin 60 mg/m<sup>2</sup>, cyclophosphamide 600 mg/m<sup>2</sup>, followed by docetaxel 100 mg/m<sup>2</sup>) was given for advance tumor to stage III and IV, repeated every three week four cycle followed by surgery, while adjuvant chemotherapy given for early tumor in stage I and stage II after surgery. Radiotherapy, 50 Gy was given in 25 fractions with 6 megavolt photons to chest wall followed by boost to scar with 10 Gy with electrons on linear accelerator. Supraclavicular fossae were also radiated with 50 Gy<sup>1</sup> in 25 fractions in node positive patients, and in patients where no axillary dissection was performed. Cobalt 60 was used for radiation therapy in selected cases.

Antibiotic monotherapy was given to all patients after surgery for a period of one week. Postoperatively all patients were followed in the ward and any complication noticed during this period were recorded. Histopathology reports were used to confirm the pathology and grading of the tumor, resection margin whether tumor free or not and lymph node status.

SPSS version 16 was used to analyze the data. Mean and standard deviation were calculated for numerical variables while frequency and percentages were computed for categorical variables.

**RESULTS:**

This study included 105 patients with mean age of 41.9+10.9 year. The age ranged from 16

<b>Table I: Clinical Presentation</b>			
<b>S. No</b>	<b>Variable</b>	<b>No.</b>	<b>%</b>
1	<b>Clinical presentation</b> Unilateral breast lump Bilateral breast lump Breast lump and nipple discharge Nipple discharge Fungating tumor Paraplegia Dyspnoea (pleural Mets) Recurrence	82 02 07 01 08 01 02 02	78.0 1.9 6.6 0.9 7.6 0.9 1.9 1.9
2	<b>Site</b> Left breast Right breast Bilateral	58 45 02	55.2 42.8 01.9
3	<b>Family history</b> Carcinoma breast Carcinoma ovary	16 02	15.2 01.9
4	<b>Size of breast lump (cm)</b> 0-2 3-5 5-7 7-10 Fungating tumor	05 15 45 32 08	04.7 14.2 42.8 30.4 07.6
5	<b>Lymph nodes</b> Axillary Supraclavicular Opposite axillary	71 13 03	67.6 12.3 02.8
6	<b>Staging of tumor</b> Stage I Stage II Stage III Stage IV	06 13 61 25	05.7 12.3 58.0 23.8

year 70 year. Majority of patients were in the third and fourth decades (n=31 - 29.5% and n=34 - 32.3% respectively). Left breast was affected in 58 (57.6%) patients while right breast in 45 (42.8%) cases. Majority of the patients (n=91 - 86.8%) present with breast lump, while breast lump and nipple discharge noted in seven (6.6%) patients (table I). Mammograms were helpful in 70 (66%) patients while diagnosis was confirmed on Tru cut biopsy in 48 (45.7%) cases (table II).

S. No.	Investigations	No.	%
1	<b>Mammogram</b>	75	71.4
	Positive	70	66.6
	Negative	14	13.3
	Not done	21	20.0
2	<b>U/S Breast</b>	105	100
	Benign	16	15.2
	Suspicious	33	31.4
	Malignant	56	53.3
3	<b>Biopsy of breast lump</b>	105	100
	Tru cut biopsy	48	45.7
	FNAC	35	33.3
	Excision biopsy	16	15.2
	Frozen section	06	05.7
4	<b>Staging of tumor</b>		
	Bone scan	105	100
	Positive	16	15.2
	Chest X Ray		
	Positive Lung Mets	06	05.7
U/S Abdomen			
Positive liver Mets	03	02.8	
FNAC : Fine needle aspiration cytology U/S : Ultrasound			

Modified radical mastectomy (MRM) and axillary clearance was performed in 70 (66.6%) patients. Wound infection was noted in eleven cases. Induction chemotherapy was given to 43 (41%) patients and adjuvant chemotherapy to 83 (79%). Tumor free resection margin was reported in 99 (94.2%) patients (table III).

#### **DISCUSSION:**

Carcinoma breast present mostly in younger age group in our set up as majority of the patients were in the third and fourth decades. The same is reported in another study.<sup>4</sup> Young age is an adverse prognostic factor specially in hormone positive breast cancer patients.<sup>5</sup> However, reports from the western world show that female breast carcinoma is

predominantly seen in the fifth and sixth decade.<sup>6</sup> The carcinoma breast was found more often in the left side in the upper and outer quadrant,<sup>7</sup> while bilateral breast lump was noted in 2% cases. Another study showed the frequency of bilateral breast lump as 4-20%.<sup>8</sup>

Family history of breast cancer was positive in 15.2% in contrast to another study which showed the positive family history of breast cancer in 18%.<sup>9</sup> In our study 2% patients had a positive history of ovarian carcinoma while another study reports both breast and ovarian carcinoma in 0.5%.<sup>10</sup> Women with a family history of both breast and ovarian cancers may have a mutation in one of the two genes (BRCA1 and BRCA2). Inherited genes may contribute to breast and ovarian cancer risk in Pakistan.<sup>11</sup>

Majority of the patients present with breast lump (86.6%). In another study the presentation of breast cancer with breast lump was noted in 68% patients. Mammography and ultrasound breast are helpful in diagnosis the disease.<sup>12</sup> Tru cut biopsy is the gold standard to confirm the diagnosis. Core biopsy has a major diagnostic value because its wide core has more reliability and validity for histopathological evaluation.<sup>13</sup>

Pakistan faces a high burden of breast cancer disease with late presentation. In this study 81% patients were diagnosed in late stage. Another study also showed the late presentation in advanced stages III and IV, in 71% patients.<sup>14</sup> The causes of late presentation were social, self-neglect, fear of surgery, and financial constraints.<sup>15</sup>

In our study 15% patients had bone metastasis and 2.8% presented with malignant ascites in contrast to another study which showed bone metastasis in 52% followed by lungs (32%). Majority of the patients in our study had intraductal carcinoma. In a study from India the same results were reported.<sup>16</sup> Colloid mucinous carcinoma, lobular carcinoma and inflammatory carcinoma are rare tumors and were noticed in our study. Inflammatory breast carcinoma is a T4 tumor according to the standard TNM staging. Inflammatory carcinoma is a histopathological diagnosis rather than a clinical diagnosis.<sup>17</sup>

MRM and axillary clearance is the method of choice performed in the majority of cases followed by MRM and axillary sampling.<sup>18</sup> Mastectomy is usually advised in patients because of increased risk of loco-regional recurrence and patients may be lost to follow up.<sup>19</sup> The management of LABC locally advanced breast cancer requires a combined

Table III: Treatment and Outcome			
S. No.	Investigations	.No	%
1	<b>Surgical procedure</b> MRM & Axillary clearance Simple Mastectomy MRM & Axillary sampling Conservative surgery	70 18 07 02	66.6 17.1 06.6 01.9
2	<b>Histopathology</b> Invasive intraductal Ca Colloid or mucinous Ca Inflammatory Ca Lobular carcinoma Resection margin Tumor free Positive tumor margin	99 03 02 01 99 06	94.28 02.85 01.90 00.90 94.2 05.7
3	<b>Induction chemo radiation</b> Chemotherapy Radiotherapy Adjuvant chemo radiation Chemotherapy Radiotherapy Both Neo adju & adju chemo	43 08 83 26 21	40.9 07.7 79.0 24.7 20.0
4	<b>Post-operative complications</b> Wound infection Seroma Hematoma Discharging sinus Local recurrence None	11 07 03 02 02 80	10.4 06.6 02.8 01.9 01.9 76.1
MRM : Modified radical mastectomy Conservative : Breast conservation Ca : Carcinoma Neo adju, adju chemo : Neoadjuvant, adjuvant chemotherapy			

modality treatment approach involving surgery, radiotherapy and systemic therapy. In patients with stage IIIB or IIIC disease who achieve maximum response with fewer than 6 cycles, further adjuvant chemotherapy can be given following surgery and radiation followed by modified radical mastectomy.<sup>20</sup> Women with early-stage breast cancer have similar outcomes with lumpectomy plus radiation, as with mastectomy. Many studies have revealed the uneven adoption of such breast-conserving surgery.<sup>21</sup> Most of our patients were not fit for breast conservation. Only 2% patients present with recurrence in our series. Young age is also a risk factor for loco-regional recurrence.<sup>22</sup> Advance presentation of the disease is the limitation for curative resection. The other limitation is the patients' lost to follow up.

#### CONCLUSIONS:

Advance stage of breast cancer was noted in young women. FNAC and core biopsy were the main diagnostic tools. Modified radical mastectomy was a safe operative procedure in majority of our patients.

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