Early Breast Cancer in Females Presenting with Palpable Breast Lumps

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ABSTRACT

Objective   To determine the frequency of early breast cancer in women presenting with palpable breast lumps.

Study design   Prospective cohort study.

Place & Duration of study   Surgical Unit - IV Civil Hospital Karachi, from December 2011 to June 2012.

Methodology   All female patients 13 year and above with palpable breast lumps were recruited in this study after seeking their consent. Triple assessment was carried out and core biopsies taken. Histopathology reports were recorded.

Results   Two hundred and eighty two females between 15 to 80 year (mean= 36.5 year) presented with breast lumps. Of the total 72% (n=199) lumps were benign on histopathology while 29 % (n=83) showed malignancy. There were 19 (7%) cases of breast abscess.

Conclusion   The frequency of breast cancer was 29% in present group of patients presenting with breast lumps.

Key words   Early breast cancer, Trucut biopsy, Breast lump.

INTRODUCTION:

Worldwide, breast cancer is a public health problem. It is therefore essential that efforts in prevention and early diagnosis are implemented. One of the major problems concerning breast cancer is lack of awareness about the disease among general public. In addition teaching of women regarding breast self-examination and mammography screening programs are not properly implemented in Pakistan. Overall survival in this condition is dependent upon the stage of the disease at diagnosis. About 54% of the women are diagnosed in stage II, and only 16% are diagnosed in stage I.[1]

All breast lesions are not malignant, and all the benign lesions do not progress to cancer; however the accuracy of diagnosis can be increased by triple assessment i.e. physical examination, mammography, fine needle aspiration cytology and core needle biopsy.[1] Breast cancer remains a significant cause of cancer related deaths in developing countries[1,2] The epidemiology of breast cancer in Pakistan is difficult to describe mainly due to a lack of tumor registry.

An early diagnosis and prompt treatment can reduce the morbidity and mortality associated with this disease. Current study aimed at determining the frequency of early breast cancer in women presenting with breast lumps so as to produce data that shall help in planning educational and screening strategies.

METHODOLOGY:

A total of 282 females aged 13 year and above presented with palpable breast lumps at Outpatient department of surgical unit IV, Civil Hospital Karachi from December 2011 to June 2012.

Trucut Biopsy was performed on all the patients with palpable breast lumps using a needle of 14 G under local anaesthesia and 3-5 samples were taken.

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Data pertaining to patient's age, marital status, duration of lump and its size, examination of opposite breast and previous surgery, were collected. After histopathology report appropriate surgery was decided. Those females who were diagnosed to have malignancy were staged clinically as well as pathologically and final results formulated.

Data was analyzed by using SPSS version 19. Mean and standard deviations were computed for numerical variables like age; whereas frequency and percentages were calculated for categorical variables like benign etiologies and early breast carcinoma.

RESULTS:

A total of 282 patients with the mean age of 36.5 year were managed. There were 112 cases (39.7%) of fibroadenoma. Malignancy was found in 83 (29.43%) cases. Thirty-four (12.05%) patients had fibrocystic disease while 19 (6.73%) cases turned out to be Inflammatory lesions (antibioma and abscesses). Details are given in table I.

Table I: Frequency of Breast Pathology in Patients With Breast Lump	
Breast Pathology	**Frequency n(%)**
Fibroadenoma	112 (39.70%)
Malignancy	
a. Early Breast Cancer	51 (18.085%)
b. Advanced Breast Cancer	32 (11.347%)
Fibrocystic Disease	34 (12.05%)
Inflammatory Lesions	19 (6.73%)
Phylloides	11 (3.90%)
Tuberculosis	9 (3.20%)
Duct Ectasia	7 (2.50%)
Benign Cyst	5 (1.80%)
Ductal Hyperplasia	2 (0.70%)

The primary lesion was in left breast in 116 (41.13%) cases, right breast (n=147, 52.12%) and bilateral in 19 (6.73%) cases. Of the total, 238 patients were married. All 83 patients, who were diagnosed as having a malignancy were also married. Thirty patients with malignancy were in the age range between 41and 50 year.

In 83 malignant cases lump size ranged from 1.5 to 5 cm. Sixty-nine patients had T2 lesion, 12 patients had T3 lesion and 2 patients had T1 lesion. In 83 patients diagnosed as breast cancer, enlarged lymph node were present in 62 patients at the time of mastectomy. In 29 cases up to 3 lymph nodes were involved by the tumor whereas 33 cases showed more than six lymph nodes involvement. Skin involvement in the form of dermal invasion or Paget's disease was seen in 29 cases.

Among breast cancer patients, infiltrating ductal carcinoma was the commonest subtype with 65 (78%) cases, while 10 (12%) cases were mucinous carcinoma, 5 (6%) medullary carcinoma, 2 (2.4%) ductal carcinoma in situ and 1(1.2%) case of infiltrating lobular carcinoma. Regarding staging of carcinoma breast, 30 patients out of 83 were in stage II, 22 patients in stage III, 20 patients in stage I, 10 patients in stage IV and on case was stage 0. Frequency of early breast carcinoma i.e. Stage 0, Stage I and Stage II was 59.3% (n=51/83).

DISCUSSION:

Breast disease is common in west and benign disease is ten times more common than carcinoma.[3] In Pakistan no statistics on breast disease are available at national level. In this study benign breast disease was more common (70.56%). This is similar to that quoted from west.[4]

In Pakistan, carcinoma breast is the commonest malignancy in pre and postmenopausal women. Delayed presentation with advanced stage of disease is common amongst women of our geographical region.[5] In India, Japan, China and Philippines incidence of breast cancer is much less as compared to Pakistan though prevalence of the risk factors is similar.[6,7]

It is impossible to know whether a breast lump is cancerous without performing imaging examinations and tissue biopsy. However, if the lump in breast is firm, hard and fixed it is more likely to be a cancer. In this study 83 patients (29.43%) were diagnosed to have malignancy in comparison to 24.4% in another study.[8]

The frequency of malignancy in the present study is higher but comparable to other reported series from the region.[9,10] These figures are higher than those observed in the western and developed countries.[11] The youngest patient diagnosed to have a malignant breast lump was 27 year old, with a histopathology of infiltrating ductal carcinoma.

In the present study the mean age at diagnosis of malignant disease was 46 +10 year . This is different from what is reported from west but is similar to a study from Singapore.[12] In studies from West the median age at presentation is estimated to be around 61 year. [5,13]

Tumor size has been classified as a category I prognostic marker in the College of American Pathologists Consensus Statement 1999 with known prognostic implication in breast cancer.[14] A larger tumor size is associated with usually advanced stage of presentation. In this study we included patients with lump size up to 5 cm. This revealed that 71% of the patients with breast cancer had lump size < 5 cm as compared to study by Malik et al which showed that in 52% cases lump was <5cm in size.[15]

In the Western world the proportion of early breast cancer diagnosed as ductal carcinoma in situ (DCIS) has increased from 2.8% in 1973 to 14.4% in 1995 due to widespread screening mammography. In our study only 2 cases were diagnosed as DCIS. This is stage 0 disease which is the precursor for invasive cancer and has an excellent prognosis. Our study showed only 2.2% frequency of DCIS as compared to study by Kayani et al that reported <1% frequency of DCIS.[16] Improved survival depends upon negative lymph node status since only 20-30% patients develop recurrence within 10 years as compared to 70% recurrence in those with axillary lymph node involvement. In our study the number of node negative cases was 25%.

CONCLUSION:
Frequency of breast cancer was 29% and frequency of diagnosis of early breast cancer in breast lumps was 18% in present study.

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