

ORIGINAL ARTICLE

A Brief Overview of Clinico-Pathological Indicators of Breast Carcinoma

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ABSTRACT

Breast cancer has been rated as the 2nd most frequent type of malignancy. As regards being a cause of death, breast malignancy is ranked fifth in order. The occurrence of breast cancer in underdeveloped countries was low when compared with economically developed world. Mode of presentation varies a lot in breast carcinoma. Pain, palpable lump, knobby bumpy breast and nipple discharge are the typical presenting modes. In 80 % of cases the most common presentation is a swelling. Pain is a nonspecific symptom regarding carcinomas. A lump is noticed when it is at least 2 cm in size. Other modes of presentation include certain changes in skin color such as redness, and orange peel like appearance (peau d orange), without the presence of lump. Sometimes a delay in diagnosis occurs as it is treated as an inflammation. Female gender is the most crucial risk factor for breast malignancy. 41 to 50 year is the peak age of breast carcinoma, occasionally at 25 years and less than 5% occur in women in age range of 70 to 80 years. Genetic makeup and women with increased estrogen levels like early menarche and late menopause also form a contributory factor. This study focuses on above mentioned clinical parameters, a few risk factors and histomorphological indicators and following formula was used $\{n = \frac{Z^2 P (1-P)}{d^2}\}$ Women diagnosed with invasive breast carcinoma in surgical specimens like excisional biopsies, incisional biopsies and mastectomies were included in this study and patients with recurrent breast carcinomas who have been receiving treatment line chemotherapy, radiotherapy and hormonal therapy were excluded from this study. This study showed that 55.8% cases left side was involved and in 44.1% cases right sided involvement was seen, 22.5% has breast carcinoma in their first step related while 10% has second step relative breast carcinoma and exposure of radiation was observed in 8%. The main presenting complaints were lump in breast, and skin changes (mentioned above). This study showed that lump in breast was the most common presenting complaint while nipple discharge was the second most frequent, female gender can be rendered a risk factor. The age decade which poses greatest risk was 41 to 50 years. There were cases in less than 30 and under 80 decades as well. Invasive ductal carcinoma was the most common type.

Key Words: Breast Lump, Invasive ductal carcinoma, Metastatic

INTRODUCTION

In 2008, due to breast malignancy there were about 458,503 deaths which made about 13.7% of total deaths due to malignancies. The frequency of breast was found to be lowest in underdeveloped countries and highest in the developed world¹. Breast malignancy is presented with pain, palpable mass, lumpiness and nipple discharge². The most common complaint is a lump³ and pain is a nonspecific indicator regarding carcinomas, it may be associated with other health related issues⁴.

A lump becomes noticeable when it is at least 2 cm in size. Lumps are usually either fibroadenomas or invasive carcinomas⁵. Change in shape and position of nipple, inversion of nipple,

rash around nipple and discharge from nipple are common presenting complaints. Patient may presented with milky, serous or bloody discharge. Raised prolactin levels may cause milky discharge. Pituitary adenoma, anovulatory cycles or patients with drug intake of oral contraceptives pills, methyldopa and phenothiazines are the common causes. Blood tinged and serous discharge from the nipple are attributable to benign or malignant condition⁶. Certain presenting manifestations like redness, warmth, swelling and peau orange without the presence of lump are treated as inflammatory disease resulting in diagnostic delay⁷. Paget's disease is another complex of inflammatory breast carcinoma. In 50% of cases

there is an underlying lump as well. In case of metastatic breast carcinoma, tumor can be found in certain locations such as bone, liver, lung and brain⁸. Most pertinent risk for breast carcinoma is the female gender. In the chance of having breast carcinoma male to female ratio is 1:100 however, due to late diagnosis the prognosis is poor in male. Breast carcinoma occur at the age of 75 to 80 years, seldom at 25 years and 5% occurs in women under 40 years of age. Malignancy at a younger age has worse prognosis in comparison to women of postmenopausal age⁹. Active proliferative cycle of breasts, may hide the symptoms resulting in diagnostic lapse.

Genetic constitution and persistent elevated estrogen levels (lack of child bearing, lack of breast feeding) and a sedentary life style has been linked to less than 10% of cases. Oral contraceptive use has been connected to cancer progression in women of premenopausal age but whether they are one of the causative agents is not clear. In families with carcinomas in relatives like mother, sister or daughter (first degree) doubles the probability of developing the disease between the age of 40 and 50 years¹⁰.

The purpose of this study was to focus on above mentioned clinical parameters, a few risk factors and histomorphological indicators.

The following formula was used:

$$n = \frac{Z^2 P (1-P)}{d^2}$$

$$= \frac{1.96 \times 10 (1-10)}{0.25}$$

Inclusion Criteria

Women diagnosed with invasive breast carcinoma in surgical specimens like excisional biopsies, incisional biopsies and mastectomies were included in this study.

Exclusion Criteria

Patients with recurrent breast carcinomas and patients receiving treatment line chemotherapy, radiotherapy and hormonal therapy were excluded from this study.

RESULTS

Table 1: Frequency of Clinical Parameters in breast Carcinoma

Characteristics	Frequency	% ages
Site of breast		
Left	39	(55.8%)
Right	33	(44.1%)
History of pain	11	14%
Family history of carcinoma (First degree relative)	16	22.5.
Family history of carcinoma (second degree relative)	07	10%
History of oral contraceptive intake	14	19%
Exposure to radiation	06	8%

Table 2: Frequency of Presenting Complaints in patients of Breast Carcinoma

Complain	Frequency	% ages
Lump in breast	57	80.56%
Nipple discharge	06	9.7%
Skin irritation and abscess	09	12.5%
Skin changes	03	3.2%

Table 3: Age Distribution in Women with Breast Carcinoma

Age (years)	Frequency	Mean±SD
< 30 years	02	27.50±2.12
30-40 years	16	35.0±2.73
41-50 years	29	44.89±2.55
51-60 years	12	54.92±2.94
61-70 years	10	64.30±2.54
71-80 years	03	73.67±4.62
Total <30-80 years	72	50.05±17.59

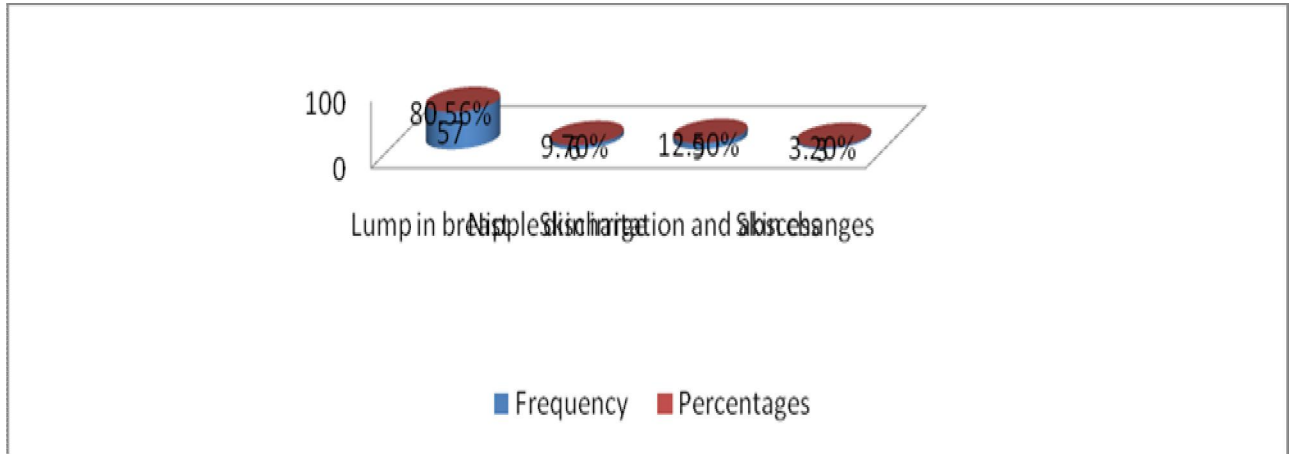


Fig 1: Frequency of Presenting Complaints in patients of Breast Carcinoma

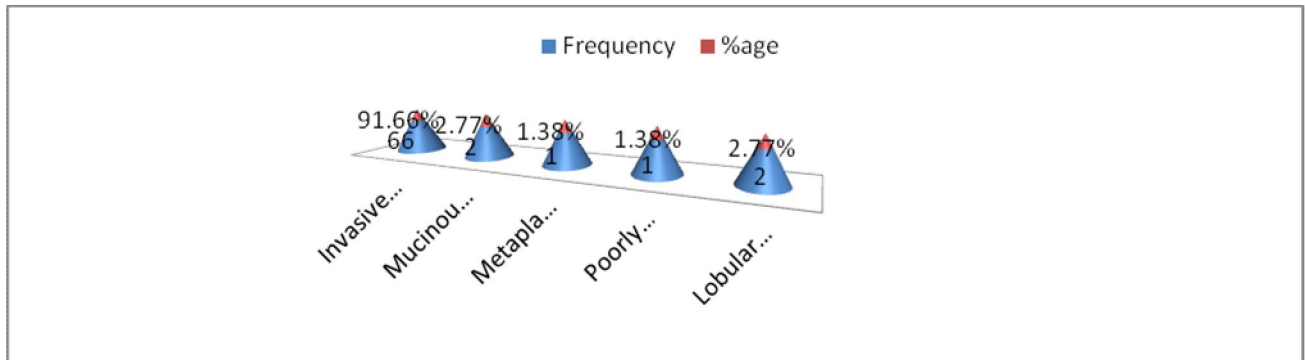


Fig 2: Percentages of Types Of Breast Carcinoma Diagnosed

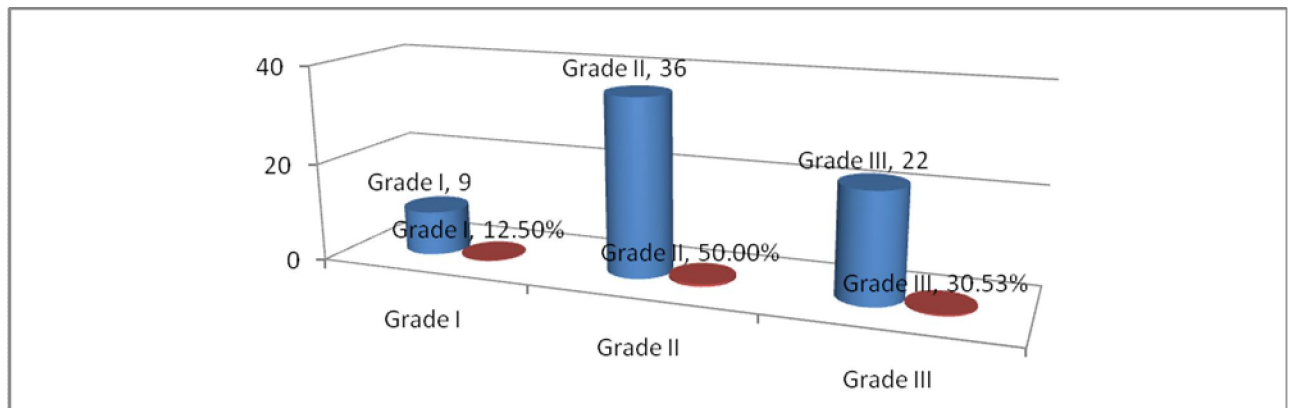


Fig 3: Frequency of different Grades in patients of breast cancer

DISCUSSION

Our study observed that in 55.8% cases left side was involved and in 44.1% cases right sided involvement was seen. A number of studies showed the similar result that the left side involvement is more common as compared to right¹¹ however; no valid reasons for left sided excess or lateralization have been elucidated¹². Present study indicated that mean age of presentation was

50 years with Standard deviation of 17.59. The age range was from less than 30 to 80 years. In United State and Western Europe, the suspected age for breast carcinoma is around 63 years. While in Iran, it was 51 years. Therefore, our study showed the similar result that age for presentation in developed world is higher as compared to under developed world¹³.

There was twofold risk of breast carcinoma in first degree relative¹⁴. Our research found that 22.5% of breast carcinoma cases were seen in women who had mothers and sisters with breast carcinoma their first degree related while 10% had second degree relatives with breast carcinoma. A support to our study is provided by the fact that familial risk factors for malignancy were increased for both ER- and ER + cases of breast carcinoma. Thus receptor status and genetic makeup foretell risk of breast carcinoma in women¹⁵. A study done on African American women found that first degree and second degree family history was not a key element as compared to that in Caucasian Americans.⁵ Oral contraceptive intake was observed in 19% of cases. Radiation was found to be a risk factor for a number of malignancies including breast ca both in developed and developing countries¹⁶. In this study Exposure of radiation was observed in 8% of cases. According to our study the presenting manifestations were swelling in breast, skin transformations (irritation, abscess, peau d'orange) and nipple discharge. Sometimes uncommon presentations can also be seen like lumpiness of all or part of breast, skin irritation, breast pain, pain in nipple, inverted or everted nipple, lump in axilla and blood tinged discharge from nipple¹⁷. Painless lump was the predominant feature around 85.3% patients and 9.7 % cases presented with nipple discharge.

In this study invasive ductal carcinoma was the most frequent histological type; around 91.66 % patients were diagnosed with invasive ductal carcinoma, 2.77% of women diagnosed with mucinous and lobular carcinoma and only 1.38% women diagnosed with poorly differentiated and metaplastic carcinoma. The most common grade for presentation was grade 11 and other studies have the similar findings^{18, 19}.

It is concluded that the female gender can be rendered a risk factor. The age decade which poses greatest risk was 41 to 50 yrs. Histologically, Invasive ductal carcinoma was the most frequent type and the most usual grade was grade 11.

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