

ORIGINAL ARTICLE

Clinical Presentation, Biopsy and Surgery of Breast Cancer in Women at Tertiary Care Hospital in Gujrat

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ABSTRACT

Aim: To detect the clinical presentation, biopsy and surgery of breast cancer in women at tertiary care hospital in Gujrat, Pakistan.

Study design: Cross sectional descriptive study.

Place and duration of study: This study was conducted in 06 years April 2014 to March 2020 at Aziz Bhatti Shaheed Teaching Hospital Gujrat, Pakistan.

Methods: Total 138 women were selected for study that was having breast lump, breast ulcer or abnormal breast (nipple) discharge. Women were admitted for investigations and further plan for treatment. Breast cancer was diagnosed on history, examination and investigations. Complete blood count, serum studies, ultra-sonography of breast, mammography and breast biopsy was planned.

Results: Total 138 women were enrolled in the study. Women 25-85 years of age were included in the study. Youngest woman was 27 years of age and the oldest was 85 years of age. Thirty two (23.18%) women were less than 50 years of age and 106(76.81%) women were more than 50 years of age.

Conclusions: Breast cancer is the commonest cancer of women and most frequent cause of cancer related deaths. Early diagnosis and appropriate treatment offers the best chance for cure. Histological diagnosis and staging is mandatory prior to treatment. The best treatment of breast cancer is carried out by multidisciplinary team.

Keywords: Breast lump, mammography, nipple discharge

INTRODUCTION

Carcinoma of breast is a common metastatic carcinoma which may spread to the distant organs like liver, lungs, bone and brain. Distant spread adds a lot in its incurability. Early diagnosis matters and gives good prognosis ultimately. Above 80% patients show five years survival rate in timely diagnosed cases¹. Risk of developing breast cancer is very high. It is approximately 1 in 8 women worldwide².

More than 1.5 million women develop breast cancer every year worldwide which makes 25% of all women cancers in world. In 2015, total 570,000 deaths were observed due to breast cancer in world³.

Immune system plays an important role in elimination of cancer cells from the human body. If cancer cell production is too great then sometimes it is difficult to eliminate from body. Under some conditions like in genetic predisposition to mutations and advanced age may lead to very high mutations in DNA and RNA^{4,5}.

Ductal hyperproliferation may be the starting point for breast tumors, which may develop into benign or malignant tumors after stimulation by different carcinogenic factors^{6,7}.

A mutagenic inflammatory response may be generated by macrophages that may start angiogenesis and make the cancer cells so strong to escape from immune response^{8,9}.

Erratic and unwanted proliferation and growth of cells originating from breast tissue may form breast cancer. Though such cancer cells may be found in all over body but the cancers are always named after human body part where it originates¹⁰.

A women having breast cancer in one breast may have more chances of developing cancer in other breast. Moreover many family members may have specific type of cancer. These family members may have increased risk of developing cancer^{11,12}.

Breast cancer is diagnosed on examination and investigations. On examination one can find a nodule and sometimes one can find a nodule on mammogram. For final diagnosis biopsy of that nodule is done¹³.

Malignant mass with pain is seen in only in 5% of cases in breast cancer. Sometimes immobility, nipple abnormalities, skin changes may also be seen along with mass. Chemotherapy, radiation therapy, surgical intervention, hormonal therapy, nanotechnology and gene therapy may be the modalities which can be used for treatment of breast cancers¹⁴.

Incidence of breast cancer is high in developed countries. Moreover 5 years relative survival rate is different in developed and developing countries. Self physical examination of breast and screening is the best tool for early diagnosis of breast cancer¹⁵.

For screening of breast cancer, mammography is commonly used and second best tool is magnetic resonance imaging^{16,17}.

Excessive alcohol intake and excessive dietary fat intake can increase risk of breast cancer. Smoking may

Received on 29-02-2021

Accepted on 13-07-2021

also increase the risk of breast cancer especially when started in early life^{18,19}.

Women with first degree relative having breast cancer have 1.75 fold increase risk of development of breast cancer in the life and this risk may increase if there are more number of relatives with breast cancer in the family²⁰.

Early menarche, late first pregnancy, late menopause and less number of kids may increase the chances of development of breast cancer in women. The risk of breast cancer increases by 3% by each 01 year delay in menopause. The risk of breast cancer decreases 5% and 10% by each 01 year delay in menarche and each additional birth of baby^{21,22,23}.

Now a day, immunotherapy is becoming popular in the treatment of breast cancer. Nivolumab and Pembrolizumab are being used for the treatment of breast cancer²⁴.

The objective of the study was to detect the clinical presentation, biopsy and surgery of breast cancer in women at tertiary care hospital in Gujrat, Pakistan

MATERIALS AND METHODS

Total 138 women were selected for study that was having breast lump, breast ulcer or abnormal breast (nipple) discharge after permission from Ethical Committee. Women were admitted for investigations and further plan for treatment. Breast cancer was diagnosed on history, examination and investigations. Complete blood count, serum studies, ultra-sonography of breast, mammography and breast biopsy was planned. Final diagnosis of breast cancer was made on breast biopsy. All women who were having negative biopsy for breast cancer were excluded from the study. Biopsy was taken by FNAC or true cut biopsy or incision biopsy. After diagnosis of breast cancer staging was done and treatment was started according to the staging of the breast cancer. Chemotherapy, hormonal therapy, modified radical mastectomy and simple radical mastectomy were the modalities used for the treatment of women with breast cancer. One or more than one modalities at one time were also selected for treatment in patients with breast cancer. Ages of women, clinical presentations of women, biopsy findings of breast, staging of the breast cancer and treatment modalities were analyzed.

RESULTS

Total 138 women were enrolled in the study. Women 25-85 years of age were included in the study. Youngest woman was 27 years of age and the oldest was 85 years of age. Thirty two (23.18%) women were less than 50 years of age and 106(76.81%) women were more than 50 years of age (Table 1).

Women with nipple discharge from breast were only 04 (2.89%), thirty one (22.46%) women presented with breast ulcer and a large number of women 103(74.63%) were with breast lump (Table 2).

FNAC gave positive results for breast cancer in 93 (67.39%) women, twenty nine (21.01%) women were confirmed by true cut biopsy and 16(11.59%) women were diagnosed by incision biopsy of the breast lump (Table 3).

Ductal cell carcinoma was seen in 135(97.82%) women, 3(2.17%) women showed phylloid tumor of breast (Table 4).

After examination and investigations staging of the breast cancer was done. Most of the women 62 (44.92%) were seen in stage III, 25(18.11%) and 39(28.26%) women were enrolled in stage I and stage II respectively. Stage IV showed 12(8.69%) women (Table 5).

Chemotherapy was given to all enrolled women 138(100%), hormonal therapy was started only in women who were hormonal receptor positive and 57(41.30%) women got hormonal therapy, modified radical mastectomy was done in 126(91.30%) women, they were falling in stage I, II and III and simple radical mastectomy was done in 12(8.69%) women with stage IV.

Table 1: Age distribution (n=138)

Age	n	%age
25-50 Years	32	23.18
>50 Years	106	76.81
Total	138	100

Table 2: Clinical presentation (n=138)

Clinical presentation	n	%age
Lump	103	74.63
Breast ulcer	31	22.46
Breast (nipple) discharge	04	2.89

Table 3: Type of biopsy (n=138)

Type of biopsy	n	%age
FNAC Biopsy	93	67.39
True cut biopsy	29	21.01
Incisional biopsy	16	11.59

Table 4: Breast biopsy finding (n=138)

Breast biopsy finding	n	%age
Ductal cell carcinoma	135	97.82
Phylloides tumour	03	2.17

Table 5: Clinical stage of breast cancer at presentation (n=138)

Staging	n	%age
Stage I	25	18.11
Stage II	39	28.26
Stage III	62	44.92
Stage IV	12	8.69

Table 6: Treatment of breast cancer (n=138)

Type of treatment given	n	%age
Chemotherapy	138	100
Hormonal therapy (in hormonal receptor +ve patients)	57	41.30
Modified radical mastectomy (all patients with stage i, ii & iii)	126	91.30
Simple mastectomy (all patients with stage iv)	12	8.69

DISCUSSION

This study was conducted in Gujrat, where only one tertiary care center is there. This tertiary care center drains a vast area of Gujrat and the surrounding areas of Gujrat as well. Gujrat is a city of Punjab, a province of Pakistan which is surrounded by two rivers. Gujrat is situated on grand trunk road in the centre of the way of Islamabad and Lahore.

Flemming and others discussed that at age 45-54 years the biopsy rate of benign breast lump was 420.2 per 100,000 cases and then it falls. The falling trend may be due to mammary dysplasia and fibroadenoma which shows high biopsy rate in early age group and in later age other malignant tumors are commonly found³².

In our study, it was seen that after 50 years of age chances of breast cancer increases. Total 106(76.81%) women with breast cancer were more than 50 years of age (Table 1).

Vargas and friends in 2002 discussed that there are 3-9% patients who presented with nipple discharge in abreast cancer clinic. Moreover Leis in 1989 discussed that 5-12% patients are referred with nipple discharge which was considered the sign of cancer^{33,34}.

In this particular study, we saw 4(2.89%) women with nipple discharge from breast (Table 2). Ernster with colleagues in 2002 and May with friends in 2000 discussed that out of all diagnosed cases of breast cancers show 20%-25% ductal cell carcinoma in situ in united states and 17 to 34% are detected by mammography^{25,26}.

In 2008, Brinton and colleagues and in 2010 Virnig with friends discussed the incidence of ductal carcinoma in situ that rapidly increased from 5.8 to 32.5 per 100,000 women in 1970 and 2004 respectively. Moreover in United States around 20% of breast cancers were diagnosed as ductal carcinoma in situ in 2015. This may be due to screening by mammography^{27,28}.

In our study ductal cell carcinoma of breast was detected in 135(97.82%) women (Table 4). Rowell with friends and Bernstein along with colleagues in 1993 told that one of the rare fibroepithelial lesions is phyllodes tumor of breast which makes 0.3 to 0.5 % of female breast tumors and the incidence is 2.1/million. Mostly the age of women was 45 to 49 years^{29,30}.

In our study, phylloid tumor of breast was detected in 03(2.17%) women (Table 4).

In 2018, Thaer Khoery observed that around 90.1% cases of breast cancers were of no special type (ductal)³¹.

DeSantis in 2016 told that early diagnosis matters and gives good prognosis ultimately. Above 80% patients show five years survival rate in timely diagnosed cases¹.

During our study, all the women were immediately started all possible treatment according to the stage at presentation. There is a big need for many such studies with long follow up to get more reliable results.

CONCLUSIONS

Breast cancer is the commonest cancer of women and most frequent cause of cancer related deaths. Early diagnosis and appropriate treatment offers the best chance for cure. Histological diagnosis and staging is mandatory prior to treatment. The best treatment of breast cancer is carried out by multidisciplinary team.

Conflict of interest: Nil

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