# History, physical examination findings and histopathological changes occurring in breast tissue during breast neoplasia.

## Dr.Fahad Khan[1];Fawwaz Bin Shahab[2];Shuja Shaukat[3]; Hassan Shahab[4]; Ali Khaliq[5]; AteebMahmood Khan[6]

### Affiliation of Authors:

[1]MBBS FCPS PART 2, Training Resident In Medicine, Civil Hospital Karachi. Phone Number: 0321-2082439;
Email address:khanfahad05@gmail.com
[2]4th YEAR MBBS, DMC, DUHS; Phone number 0312-2304212;
Email address:fawwazbinshahab@hotmail.com
[3]4th YEAR MBBS,DMC, DUHS; Phone number 0323-2506806;
Email address:shuja_dowite@hotmail.com        .
[4]4th YEAR MBBS, DMC, DUHS; Phone number 0332-3728972;
Email address:hassanshahab1993@gmail.com
[5]4th YEAR MBBS, DMC, DUHS; Phone number 0323-2471392;
Email  address:genius123creed@hotmail.com
[6]4th YEAR MBBS, DMC, DUHS; Phone number 0313-2015500;
Email address:dr.ateeb_mk@live.com

**ABSTRACT:**

OBJECTIVE:

*To evaluate history, physical examination findings and histopathological changes occurring in breast tissue during breast neoplasia in patients presenting at tertiary care government hospitals of Karachi*

***METHODOLOGY:***

* *Placeof Study: A file review was conducted using the data from the histopathology laboratory of Dow Medical College. The data for the patients for the year 2013 was used.*

* *Sample: 1709 cases were overall mentioned in the file out of which 81 were of breast neoplasia. (file review: year 2013)*

* *Purpose of The Survey: Breast cancer is the second most common neoplasia in women and is the cause countless millions of death in many undocumented cases throughout the world among those who avoid proper medical checkup because of the condition. Since population – based data on the prevalence of breast neoplasia and its influence in Pakistan are lacking, we aim to carry out a retrospective file review of all patients presenting with breast neoplasia at the CHK, JPMC and Lyari General Hospital by using a Performa especially prepared for the purpose.*

*Study Design:*

*This research is a Retrospective Cross Sectional study.*
*A file review was done using the following Variables*
*Name, Father's Name, Age, Sex, marital status, socioeconomic status, findings of history of patient i.e. mastalgia, discharge, family history; Findings of Physical examination in breast neoplasia i.e. side and site (quadrant) of the breast involved,*

*nipple inversion, breast lump, its mobility, surface of breast, lymphadenopathy, and the histopathological diagnosis of the disease.*

*Inclusion Criteria:*

- *Admitted patients of CHK, JPMC and LYARI General Hospital in general surgery wards will be included*
- *Patient's age range will be from 10 to 90 years.*

*Exclusion Criteria:*

- *Patients presenting in CHK, JPMC and Lyari General Hospital Surgical OPDs will be omitted in the study.*

*Patients of skin lesions will also be excluded from our research.*

## KEY WORDS:

Fibrocystic changes; Proliferative disease without atypia; Fibroadenoma; Breast abcess; Mastitis; Ductal carcinoma in-situ; Invasive ductal carcinoma.

## INTRODUCTION

Diseases may vary with environment and socio economic conditions of the region. This study is based on observing the frequency of the breast neoplasias in the current local population, to evaluate their histopathological features and compare it with other studies carried out in Pakistan and with the global standards.

This study is a file review ofpatients with breast neoplasia from the three outsized and overcrowded hospitals of the city named CHK, JPMC and LGH.In Pakistan, Breast neoplasia is one of the leading cause of morbidity mostly among young females and also in perimenopausal women (as contrary to statistics of west) [1/2]. Great number of breast lesions are benign in origin, the most commomhistopathological type being fibroadenoma while the leading carcinoma is Invasive ductal carcinoma[3]. The

commonest clinical presentation in breast neoplasia was lump followed by diacharge ,mastalgia and nipple inversion.[2/4]Risk of breast cancer appeared to be high in patients with a positive family history.[1]

Since breast cancers have become the leading cause of mortality amongst females, this study was therefore conducted to essay the load of breast diseases in this part of the world. It might serve for both, the effective counseling and to assess the need for development of more specialized breast care centres in our locality. Furthermore the results of such study can provide data for epidemiological interests and help compare the local data with data from other parts of the country and regional and international researches.

## METHODOLOGY

Sample: 1709 cases were overall mentioned in the file out of which 81 were of breast neoplasia. (File review: year 2013)

MaterialandProcedure:Questionnaire was designed according to the objective of the study and then data of the following variables was collected from the file of laboratory with permission. Variables include Name, Father's Name, Age, Sex, marital status, socioeconomic status, findings of history of patient i.e. mastalgia, discharge, family history; Findings of Physical examination in breast neoplasia i.e. side and site (quadrant) of the breast involved, nipple inversion, breast lump, its mobility, surface of breast, lymphadenopathy, and the histopathological diagnosis of the disease.

## RESULTS:

According to this study conducted on patients presenting for biopsy at the histopathology laboratory of Dow Medical College, a total of 81 cases of breast neoplasia were recognized among 1709 cases, with the rest being ovarian fibroids

and neoplastic changes, uterine neoplasias, benign and carcinomatous prostatic changes, neoplastic and no neoplastic diseases of gall bladder   etc., leading to an approximate incidence of   4.75% breast neoplasias among all the different varieties of abdominal-pelvic neoplastic diseases.

Throughout the year, only one case of neoplasia breast was reported in a male patient (1.2%), while all the other 80 (98.8%) cases were seen among women (reporting a male; female incidence ratio of 1;82) of different age groups.(Graph#1)
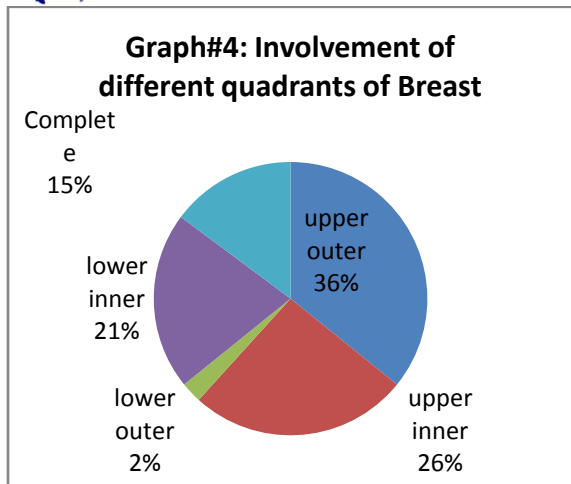
**Graph#1: Male to Female Ratio Of Breast Diseases**
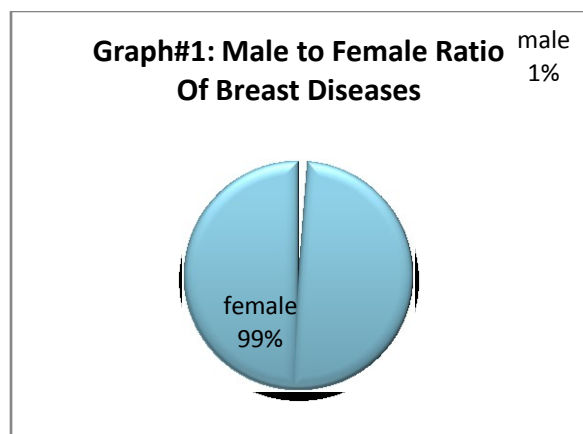


24 women, respectively in their $2^{nd}$ as well as $3^{rd}$ decades of life were said to be mostly effected by breast neoplasias (i.e. 29.6% of the cases were found in women of this age group), followed by 15 cases in the age group 40-49 (i.e. 18.5% of the total no. of cases), 12 cases in the age group 30-39 (i.e. 14.8% of the total), 3 cases in 60-69 group (3.7%), 2 cases in 50-59 (2.5%) and a single case in 70-79 (1.2%) age group.(Graph#2)
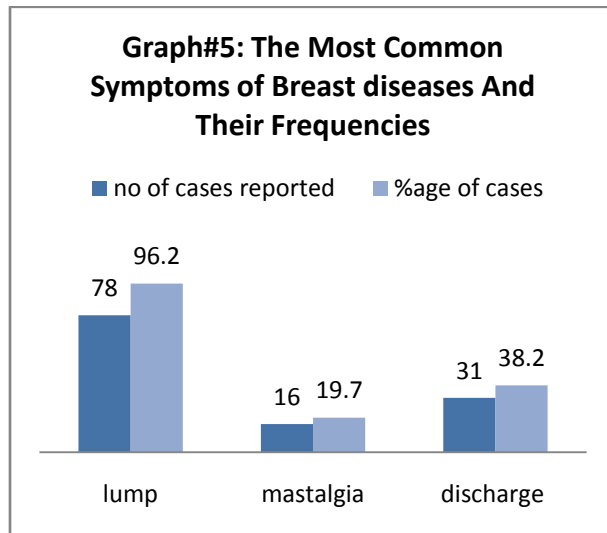
**Graph#2: Incidence of Breast Neoplasia at different Age Groups**
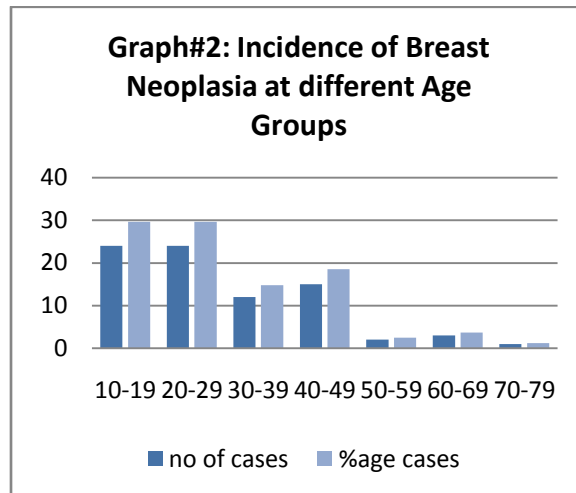


40 out of total females reporting with neoplasia of breast (i.e. 49.4%) were married while 41 (i.e. 50.6 %) were unmarried. (Graph#3)

**Graph#3: Incidence of Breast Neoplasia And the Marital Status of Patient**
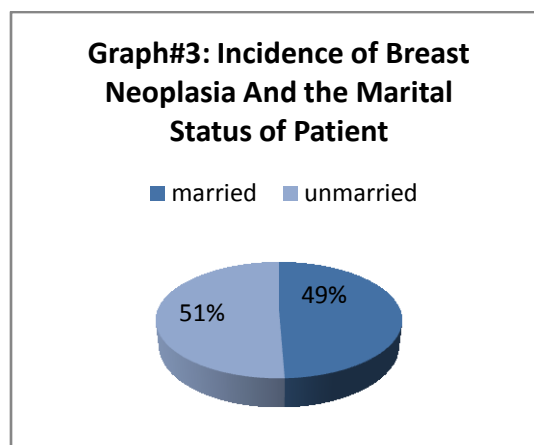


Right sided involvement was reported in 42 patients (i.e. 51.9%) while 39 patients (I.e. 48.1%) showed left sided involvement. To be more specified, the most commonly reported quadrant of breast involved in the breast disease was the upper outer quadrant (in 29 cases or 35.8% of the subjects.) (Graph#4)

**Graph#4: Involvement of different quadrants of Breast**

Complete 15%

lower inner 21%

lower outer 2%

upper outer 36%

upper inner 26%

**Graph#5: The Most Common Symptoms of Breast diseases And Their Frequencies**

- no of cases reported
- %age of cases

lump: 78 / 96.2
mastalgia: 16 / 19.7
discharge: 31 / 38.2

The commonest clinical feature with which majority of patients presented to an opd clinic was breast lump noted in about 78 patients (i.e. 96.3%) of the cases followed by discharge (seen in 31 cases i.e. 38.2%), purulent being most common (in 18 cases i.e. 22.22%), mastalgia seen in 15 cases (i.e. 18.5%) reported during the year. (Graph#5 & 6)

**Graph#6: Types of Discharge Reported with Breast Neoplasia**

purulent 22%

bloody 4%

serous 11%

nil 62%

watery 1%

The most common histopathological diagnosis made after biopsy was a benign breast neoplasia of fibroadenoma type reorted in 42 cases (i.e 51.9%) followed by a malignant neoplasia of invasive ductal carcinoma type, seen in 12 (i.e. 14.8%) of the subjects. The ratio of benign to malignant breast disease was found to be 4.9:1(61 being benign while 13 malignant).

Among the benign neoplasias of breast, fibroadenoma is followed in frequency by breast abcess (in 10 cases i.e. 12.3 %), fibrocystic changes (in 5 patients i.e. 6.2%), mastitis (in 3 cases i.e. 3.7%) and proliferative breast disease without atypia (in 1 cases i.e. 1.2%). On the other hand, invasive ductal carcinoma was followed by ductal carcinoma in situ (in 1 case i.e. 1.2%) among the breast malignancies. (Graph#7 & Table#1)
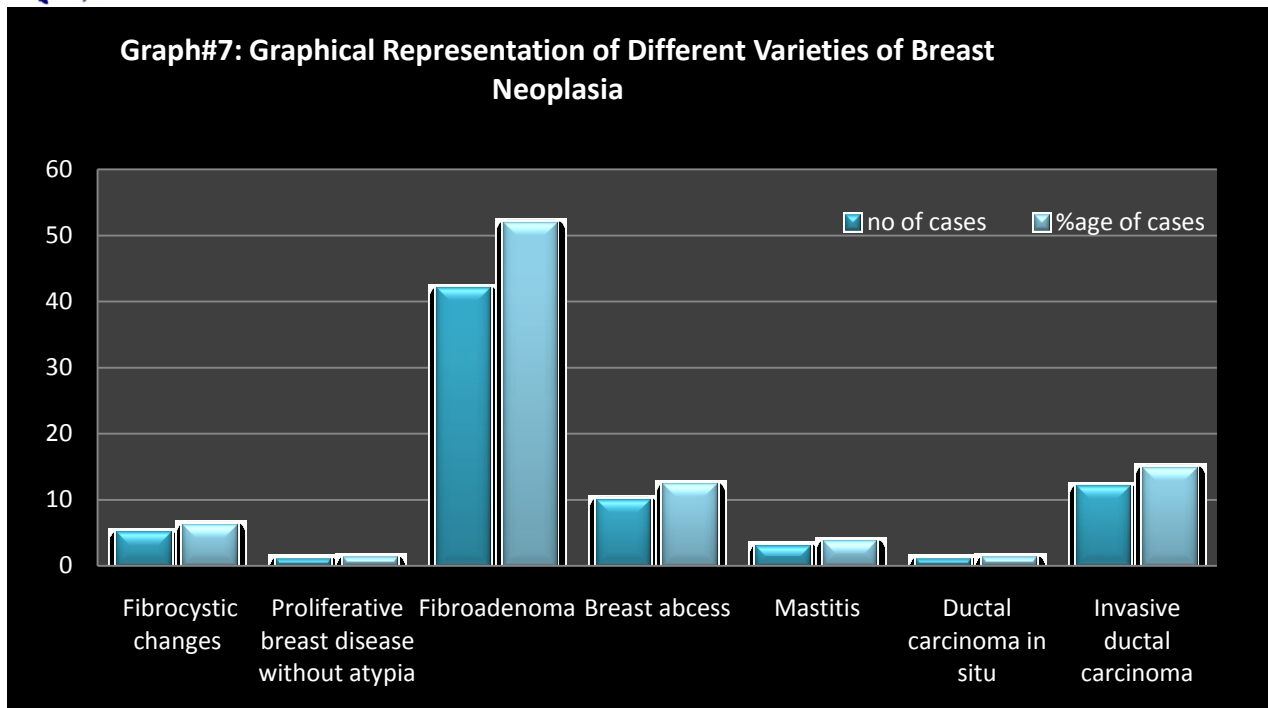
Graph#7: Graphical Representation of Different Varieties of Breast Neoplasia
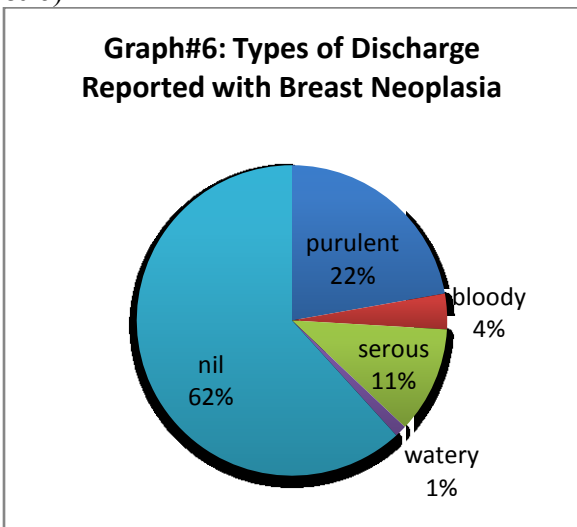
## Table # 1:

| Type of breast neoplasia | Name of breast neoplasia | No of cases reported during the period of study | Incidence i.e. percentage of disease |
|---|---|---|---|
| benign neoplasia | **Fibrocystic changes** | **5** | **6.2%** |
| | **Proliferative disease without atypia** | **1** | **1.2%** |
| | **Fibroadenoma** | **42** | **51.9%** |
| | **Breast abcess** | **10** | **12.3%** |
| | **Mastitis** | **3** | **3.7%** |
| Malignant neoplasia | **Ductal carcinoma in-situ** | **1** | **1.2%** |
| | **Invasive ductal carcinoma** | **12** | **14.8%** |

## DISCUSSION:

This study was conducted to see the pattern of breast cancer and its various aspects in the local setting. The results of the present study were found similar to most of the other localstudies but the results regarding the stage of disease were quite different from those of Western statistics where breast screening programs and patients awareness

has made an early detection and treatment of the disease.

Breast neoplasia is one the widespread problem existing in world commonly in females but few males also showed the disease ratio being 1:82 reasons being the development of breast cancer is under the overstimulation of estrogen so in rare cases but usually in adolescence due to hormonal instability in males can develop breast cancers.[1]

Mostly/ females in their young age i.e. 2nd and 3rd decades of life are diagnosed with certain neoplastic condition of Breast[11/12]followed by females of perimenopausal age (40 to 49 years)[14] while it is rare in old age (60 to 70 years)[2/3/4/5/6/8/9]

Few common risk factors for breast neoplasia includes 1) marital status: generally married females are affected more as compared to unmarried females2) lack of breast feeding and 3) smoking[4/6/9]

On examinationright sided involvement of breast wasfound more common in this study[14] as opposed to past studies[1/3.] The upper outer quadrant is usually involved, particularly in malignancies of breast[1/6/14]. Detailed history based evaluation revealed that patients typically presented with breast lump[6/11] followed by discharge and pain[2], this has also been shown in other articles as well[3/4/5/7]

Lastly the most common benign lesion appeared fibroadenoma[11] followed by breast abscess, fibrocystic changes and mastitis[5] while invasive ductal carcinoma emerged as most common malignant state[13/14] followed by ductal carcinoma insitu which is very rare[1/3/6/10/11]. But overall benign lesions are more common as compared to malignant lesions[6]

## CONCLUSION:

Breast neoplasia still exists in our society and in fact the incidence is increasing day by day, not only in developing world but also in developed world, the reason being delayed screening. Large scale counseling and awareness campaigns are needed to educate our people of the significance of breast masses, and ensure those with neoplaisa breast the benefits of screening programs in both the early detection and better treatment outcome.

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