



## HISTOPATHOLOGICAL SPECTRUM OF BREAST LESION IN TERTIARY CARE HOSPITAL, IN CHHATTISGARH INSTITUTE OF MEDICAL SCIENCES, BILASPUR, CHHATTISGARH

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### ABSTRACT

**Background:** In 2020, there were 2.3 million women diagnosed with breast cancer and 6.85 lakh death globally. As of the end of 2020, There were 7.8 million women alive who were diagnosed with breast cancer in past 5 year thus early diagnosis is necessary for proper management and to prevent early death of the patients. Histopathology is still the gold standard for the diagnosis of breast cancers. Self breast examination, screening programs, mammography, FNAC, MRI and immunohistochemistry also play important role in early diagnosis and proper management of the disease. **Objective:** To study the histopathological spectrum of breast lesions on the basis of type, age, sex and site distribution. **Method:** This retrospective study was carried out in the department of pathology, Chhattisgarh Institute of Medical Sciences (CIMS), Bilaspur, (C.G.) during January 2016 to Dec 2021. Study included total of 187 cases, 1000 blocks and 1200 stained histopathology slides (HandE stained). All mastectomy specimens received for histopathological examination suspected for neoplastic and non-neoplastic lesions of the breast were included. Women with obvious malignant disease or post radiotherapy /chemotherapy were excluded from the study. Detailed parameters were collected from histopathological register, studied and analyzed. **Result:** Total 187 cases of breast lesions were studied. 160 patients presented with lump, 26 lump with nipple discharge and rest present with nipple discharge, in which 186 (99.46%) were female and 01 (0.54%) were male. Out of 187 cases 49 (26.21%) were found Malignant and 138 (73.79) were benign lesions, Right sided breast lesion were 95(51%) Left were 87(46%) and Bilateral lesions were found to be 05 (3%). Among benign breast lesions most common was fibroadenoma 83(60.14%) followed by Fibrocystic disease 32(23.18%) of the breast. Among Malignant breast lesions most common was infiltrating ductal carcinoma 30 (61.22%), followed by medullary carcinoma 9(18.37%).**Conclusion:** In our study we concluded that infiltrating ductal cell carcinoma was the most common malignant lesion of breast. Clinical diagnosis is not enough for determination of the nature of lesion. Histopathological evaluation is important tool for diagnosis of invasive breast cancers also noninvasive and early stage breast cancers.

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### INTRODUCTION

The breast is a glandular organ; Composed of ducts and Lobules lined by luminal and myoepithelial cells which are embedded in to two type of stroma interlobular and intralobular, which undergoes pronounced hormonal changes throughout the women's life. Spectrum of the breast diseases ranging from inflammatory to metastatic carcinoma arises from different component of breast tissue. In 2020, there were 2.3 million women diagnosed with breast cancer and 6.85 lakhs death globally. As of the end of 2020, there were 7.8 million women alive who were diagnosed with breast cancer in past 5 year so early diagnosis is necessary for proper management and prognosis to prevent early death of the patient. Histopathology is still gold standard. [1] Self examination, screening programs, mammography, FNAC, MRI and immunohistochemistry also play important role in

early diagnosis and proper management of the disease. Benign lesions are more common than malignant lesions. Various breast diseases arise from different part of the breast. The Breast lesion arises from lobules and terminal ducts are cyst, sclerosing adenosis, hyperplasia, papilloma and carcinoma. Duct ectasia, squamous metaplasia Paget disease from large ducts. Lesions like Fibroadenoma, Pylloides arises from intralobular stroma and fat necrosis, lipoma, fibromatosis, and sarcoma involves mainly interlobular stroma [2]

**Objective:** To study the histopathological spectrum of breast lesions on the basis of type, age, sex and site distribution.

### MATERIAL AND METHODS

**Method:** This retrospective study was carried out in the department of pathology, Chhattisgarh Institute of Medical Sciences (CIMS), Bilaspur, (C.G.) during January 2016 to Dec

2021. Study included total of 187 cases, 1000 blocks and 1200 stained histopathology slides (HandE stained). All mastectomy specimens received for histopathological examination suspected for neoplastic and non-neoplastic lesions of the breast were included. Women with obvious malignant disease or post radiotherapy /chemotherapy were excluded from the study. Detailed parameters were collected from histopathological register, studied and analyzed.

**RESULTS**

This retrospective study was carried out in the department of pathology, Chhattisgarh Institute of Medical Sciences (CIMS), Bilaspur, (C.G.) during January 2016 to Dec 2021. Study included total of 187 cases, 1000 blocks and 1200 stained histopathology slides (HandE stained). The results are as follows:

Total 187 cases of breast lesions were studied. The age group of the patient Shown in figure-1 ranging from 10 years to 70 yr about 160 patient present with the complain of lump , 26 lump with nipple discharge and rest present with only complain of discharge. Among 186 (99.46%) were female and 01 (0.54%) were male.[Figure-2] out of 187 cases 49 (26.21%) Malignant and 138 (73.79%) Benign lesions, Right sided breast lesion were 95(51%) Left 87(46%) and Bilateral 05(3%).

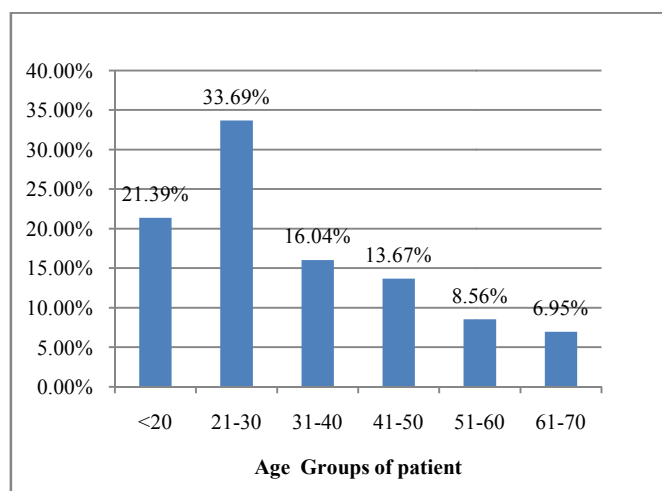


Fig 1 Age incidence of breast disease

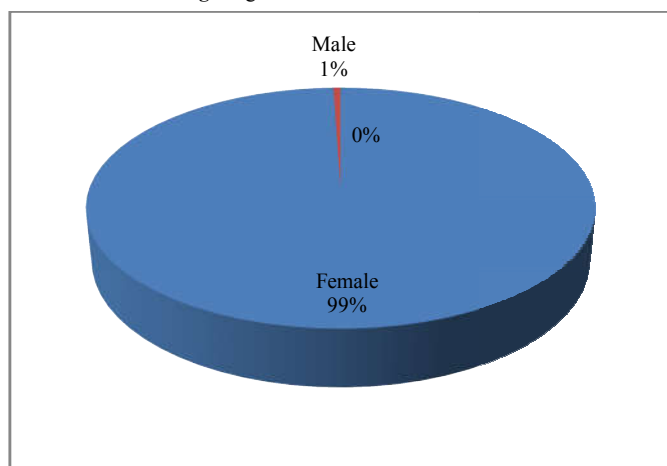


Fig 2 Female to male ratio

Among benign breast lesion most common is fibroadenoma 83(60.14%), included Maximum patient under 30 Years Age. Followed by Fibrocystic disease 32 (23.18%) of the breast. Among Malignant breast lesion most common is infiltrating

ductal carcinoma 30(61.22%) higher in 41-50 years followed by medullary carcinoma 9(18.37%) cases.

**Table 1** Showing Cases of Various Lesions in<30 and >30 Years Age

Type of lesions	<3o Years Age	>3o Years Age	Total
Inflammatory conditions	02	00	02
Fibrocystic change	22	10	32
Fibroadenoma	51	32	83
Benign breast diseases	16	04	20
Gynaecomastia	01	00	01
Carcinoma breast	03	46	49
Total	95	92	187

**DISCUSSION**

In our study group age range varies between 10 to 70 years. Similar to Suhail Farooq *et al*, Yogalakshmi S *et al* and Kumar R. *et al*.<sup>[3][4][5]</sup> In our study, Total 187 breast tissue lesions include 138(73.79%) comprised benign breast lesions while 49 (26.21%) was malignant lesions. In western countries and Africa, the percentage of malignant breast lesions is usually high (10% and 21%, respectively).<sup>[6][7]</sup> our study showed that most common benign lesion was fibroadenoma (60.14%) similar with 60.56% Suhail Farooq *et al* higher from 46% Yogalakshmi S *et al* differ with Kumar R. *et al*. maximum no. of cases was seen 10-20 years followed by 21-30year. in our study Fibroadenoma shows different histological variant like pericanicular, intracanicular, mixed few giant and juvenile fibroadenomas also noted. Changes like florid hyperplasia Adenosis, hylanization also associated with fibroadenoma which is similar in this study.<sup>[8][9]</sup>

We showed in our study that malignant lesion were 72% of total cases within 41-50years age group comparable with study of Suhail Farooq *et al*.<sup>[2]</sup> Most common malignant lesion were infiltrative ductal cell carcinoma (61.22%) near to yogalakshmi S *et al*(77%)This incidence is lower than Malik and Bharadwaj study (88.20%) and Kulkarni *et al*. study (84.85%) conducted in the year 2003 and 2009, respectively.<sup>[10][11]</sup> followed by medullary and metastatic carcinoma comparable with yogalakshmi S *et al*. Breast invasive ductal carcinoma (IDC) is a common breast malignancy and a major cause of cancer-related death in women worldwide.<sup>[12][13]</sup>

Lobular Ca (6.1%) comparable to Suhail Farooq *et al* and Ferlay Jacques *et al*.<sup>[14]</sup> The morphologic features of lobular carcinoma differ from those of ductal carcinoma. ILC is characterized by small, round cells that are bland in appearance and have scant cytoplasm, which infiltrate the stroma in single file and surrounded benign breast tissues in a targeted manner.<sup>[15][16]</sup> Sarcoma is very rare breast malignancy which is seen only 2.0% in present study. In our study Duct ca in situ is 2.0% DCIS is characterized by malignant epithelial cells within the breast ducts without invasion or breach of the myoepithelial layer or basement membrane.<sup>[17]</sup> Histopathologic features of DCIS include both architectural subtype and nuclear grade and vary widely, giving way to numerous classification systems, none of which is uniformly accepted. The architectural subtypes include comedo, cribriform, micropapillary, solid, and mixed. Comedo lesions, example, represent plugged ducts with atypical cells and central necrosis.

## CONCLUSION

Most common benign tumor found in our study was fibroadenoma and infiltrating ductal carcinoma was most common malignant lesion of the breast. Distant metastasis was associated with poor prognosis. Cancer screening programs, mammography, MRI, and FNAC findings with Histopathology plays a key role in the diagnosis and treatment of breast diseases. Histopathological evaluation is important tool for early diagnosis and prompt management of the early stage breast lesion.

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