STUDY OF BREAST TUMOURS IN MAHARASHTRA POPULATION – A RETROSPECTIVE STUDY

Original Research Article

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Abstract

Background: Breast tumours may be benign or malignant but these tumours of breast create panic in the patients and family members because death of female due to Carcinoma of breast next to Carcinoma of cervix is quite common. **Materials and Methods:** 95 patients of different age group females having breast tumours were studied. The excision biopsy specimen, lumpectomy specimen's sections were taken processed and stained with Haematoxylin and eosin, histopathological study was done under microscope. The types of benign and malignant tumours were noted and classified. **Result:** 53 (55.7%) Fibroadenoma, 16 (16.8%) Fibradenosis, 10 (10.5%) Fibrocystic disease, 3 (3.15%) inflammatory lesion 1(1.05%) ductal papilloma, 1 (1.05%) galactocele, 11 (11.5%) malignancy. **Conclusion:** These various types of breast tumours will help the pathologist to differentiate the benign and malignant lesions at the early stage because end stage of breast cancer is un-curable and ends in death of the patients.

INTRODUCTION

Breast tumours may be malignant or benign, but these tumours of breast create panic among females and whole family members because cancer of the breast is now days the most common cause of death in women. In Indian women it is the second most common cause of death followed by cervical cancer. The etio-pathogenesis of benign breast disease is somewhat known. Most of these diseases occur due to the deviation from the normal development and involution. These may be in the form of hyperplasia, fibrosis, papillomatosis or cyst formation.[1,2]

Aetiology of breast cancer is still unknown but certain factors like age, genetic (hereditary), diet, hormonal contraceptive pills, hormonal replacement therapy might be the contribution or aggravation factors for malignancy of breast. Most diagnosis of breast tumours has triple assessment that is combination of clinical, radiological and cytological (histo-pathological) features. Hence attempt was made to evaluate different types of tumours of breast includes benign and malignant at different age groups.[3,4]

MATERIALS AND METHODS

95 female patients aged between 11 to 90 years regularly visiting to department of pathology, Datta Maghe Medical College (DMMC) Wanadongri Hingana Road, Nagpur-440010, Maharashtra were studied.

Inclusive Criteria
Excisional biopsy specimens, Lumpectomy specimens and specimens received as referral cases in the breast pathology were selected for study.

Exclusion Criteria
All inoperable breast tumours were excluded from study.

Method
The excision biopsy specimen, lumpectomy specimen examined grossly for their size, shape, colour and consistency, cut surfaces were noted for colour, size and secondary changes as necrosis, cystic degeneration, haemorrhage and fibrosis. Sections were taken, processed and stained with routine haematoxylin and eosin stain. Detailed microscopic examinations were undertaken for histo- pathological diagnosis. Benign tumours, inflammatory lesions, fibrocystic disease, ductal papilloma, galactocele and malignant lesions were noted and classified.

Duration of study January-2021 to December-2022

Statistical Analysis
Various age groups of females and typesofbenign and malignant tumours were classified with percentage. These statistical analyses were carried out in SPSS software.
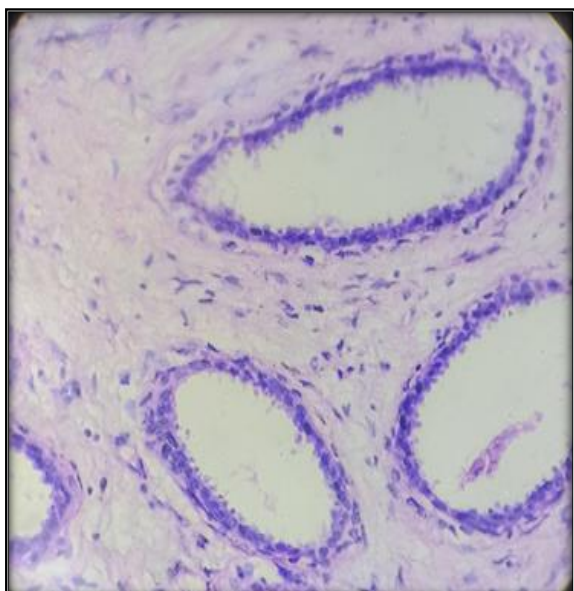
1681

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Figure 1: Fibrocystic disease of breast

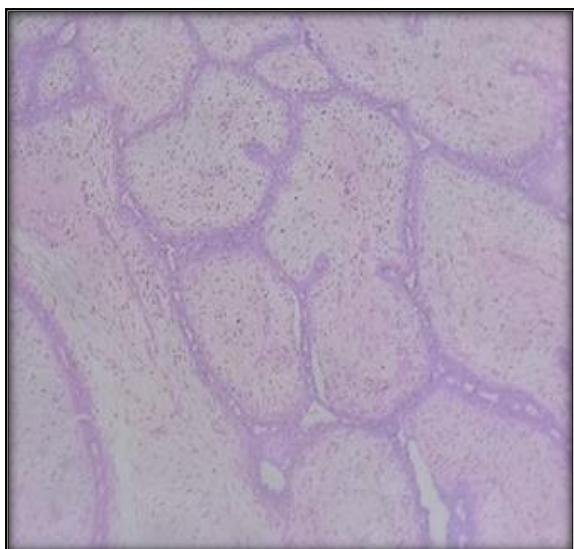**Figure 2: Intra canalicular fibro adenoma of breast**
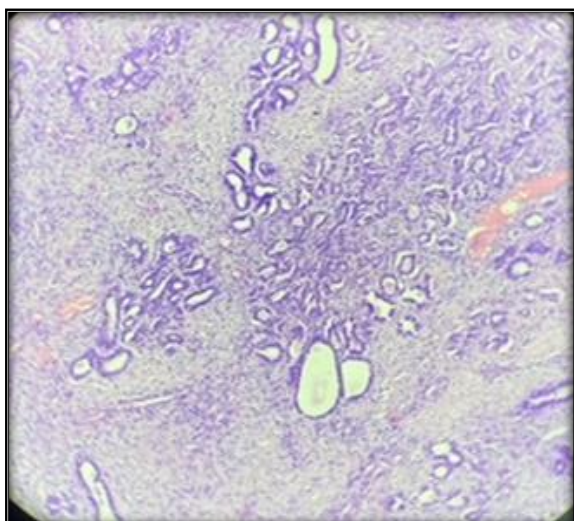

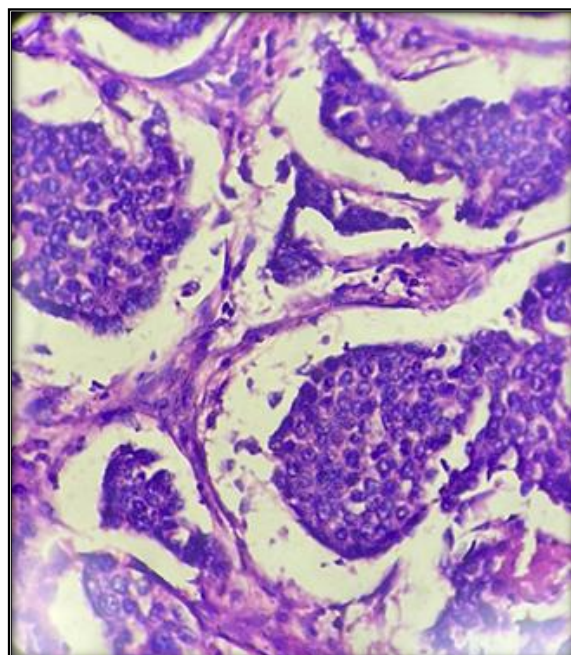**Figure 3: Fibroadenosis of breast**

Figure 4: Infiltrating duct carcinoma of breast

RESULTS

[Table 1] Distribution of age groups from 11 years to 90 years. Highest incidences of breast tumours were observed 44 (46.3%) in 21-30 years followed by 23 (24.2%) in 31-40 years and least incidences were observed1 (1.05%) in 71-80, 81-90 years of age.

[Table 2] 53 (55.7%) fibro adenoma, 16 (16.8%) Fibro adenosis, 10 (10.5%) fibrocystic disease, 3 (3.15%) inflammatory lesion, 1(1.05%) ductal papilloma, 1 (1.05%) Galactocele, 11 (11.5%) were Malignant.

1682
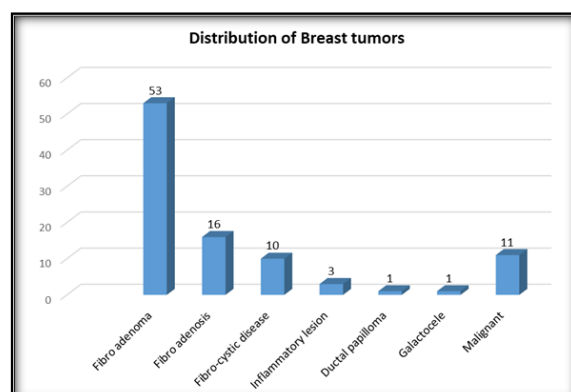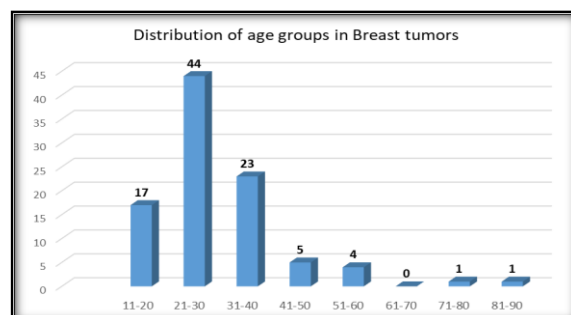
Table 1: Total No. of patients: 95, Distribution of age groups in Breast tumours

Age	Number of patients (95)	Percentage (%)
11-20	17	17.8
21-30	44	46.3
31-40	23	24.2
41-50	5	5.26
51-60	4	4.21
61-70	0	--
71-80	1	1.05
81-90	1	1.05

Table 2: Distribution of Breast tumours

SI No	Breast lesion	Number	Percentage (%)
1	Fibro adenoma	53	55.7
2	Fibro adenosis	16	16.8
3	Fibro-cystic disease	10	10.5
4	Inflammatory lesion	3	3.15
5	Ductal papilloma	1	1.05
6	Galactocele	1	1.05
7	Malignant	11	11.5

DISCUSSION

Present study of breast tumours inMaharashtra Population. Highest prevalence of tumours observed 44 (46.3%) in the age group 21-30 followed by 23 (24.2%) in 31-40 years and least 1 (1.05) in 71-80, 81-90 years of age (Table-1). 53 (55.7%) Fibro adenoma, 16(16.8%) Fibro adenosis, 10 (10.5%) were Fibrocystic disease, 3 (3.15%) inflammatory lesions, 1 (1.05%) ductal papilloma, 1 (1.05%) galactocele, 11 (11.5%) were malignant (Table-2) [Figure 1-4]. These findings are more or less in agreement with previous studies.[5-7]

The probable reason for these tumours of the breast could be due to hormonal dependency, lactation and involution at menopause which is possible contribution to form tumour in the breast.[8]

Fibroadenoma, fibroadenosis, fibrocystic disease were observed more number in females during puberty it once again confirms that, hormonal release are inter-linked with these tumours observed in the females having menstrual periods.[9] It was also reported that, tumours of the breast observed in females who are under therapy of oral contraceptives hence side effects of these oral contraceptive may be responsible for breast tumours in adult females. Suppression of formation of zygote or implantation of zygote may have adverse effect. These adverse reactions might have resulted in tumours of breast.[10] As a breast is a modified sweat gland having lactiferous ducts, stroma is under direct control of hormones, prolactin and oxytocin. Hence variations in the release of these hormones may leads to tumour in breast.

FNAC is technique to differentiate benign and malignant tumours of breast.

Male breast cancer was observed 1:110 ratio in male and female. It is reported 0.9% globally.[11] The size of malignant lumps (maximal diameter on palpation) varies between 2-4 cm and 4-6 cm and in benign also they vary from 2-6 cm and inflammatory lumps were 2-4 cms and in some cases fibroadenoma reported the giant size of 10 cm.

Nipple papilloma is an uncommon benign breast tumour. Polypoid lesion arising from surface of the nipple includes nipple papilloma, Fibro epithelial stromal polyp of the nipple. In the paget's disease and malignant breast lesion with nipple involvement has to ruled out. Hence clinical and imaging features of benign pathologies like papilloma, nipple adenoma and its differences with malignancies like paget's disease and ductal carcinoma are the important factors are required for the adequate management of disease.[12] The malignant breast tumours were evaluated immune-histochemically Oestrogen receptor (ER), Progesterone receptors (PR) and HER2/neu positivity breast carcinoma (IDC). The correlation between tumour grade and ER/PR/HER2 expression were analysed.

CONCLUSION

Present is a retrospective study of breast tumours and nipple adenoma. Breast tumours self-examination of female and health education to females is very important because she can feel and realise the tumour before access to medical aid. There are triple assessment forthe tumours of the breast are clinical, radiological and cytological features. In malignancy there is positive correlation ER and PR and inverse correlation with HER-R/neu. This study needs further genetic, hormonal, nutritional, environmental, patho- physiological studies because exact pathogenesis of begin or malignant tumour is still un-clear.

Limitation of Study

Owing to tertiary location of research centre, small number of patients and lack of latest technique, we have limited findings and results.

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1684

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