Original Article

Study of breast lesions in the tertiary health care centre

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Abstract

A retrospective study of one year from 1st January 2015 to 31st December 2015 was undertaken to determine the histopathological spectrum of various breast lesions. The objective of the study was to estimate the frequency of breast lesions in Department of pathology, Government Thiruvarur Medical College, Thiruvarur, a tertiary care centre with different age groups. Clinical features and histopathological findings were studied in 129 cases. Out of 129 cases, benign lesions constituted 77.5% and malignant constituted 22.5%. The commonest benign tumor was fibroadenoma and the commonest malignant tumor was infiltrating ductal carcinoma – NOS type. About 13.2% of cases were male and 86.8% were female in this study. The commonest male breast lesion is gynaecomastia.

Keywords: Fibroadenoma, Fibroadenosis, Infiltrating ductal carcinoma, Gynaecomastia.

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INTRODUCTION

Breast lesions are the commonest heterogenous group of disorder ranging from self-limiting inflammatory lesion, benign breast lesions to life threatening invasive cancer[1]. Breast diseases are showing rising trend worldwide[2]. Benign proliferative breast lesion is an extremely complex and interrelated group of proliferative disorder of the breast parenchyma, most of which are probably not true neoplasm but rather hormone induced hyperplastic process[3]. Fibroadenoma is one of the most common cause of a benign lump in the breast. These lesions may occur at any age after puberty[4]. Breast cancer is one of the most common malignancies in women. Advances in imaging technique and increased use of needle biopsy have greatly assisted the pre operative evaluation of breast lesions[5]. In present study, we are going to discuss the distribution of breast lesion in various age group and the proportion of benign and malignant lesions.

MATERIALS AND METHODS

This study was done retrospectively in the Department of Pathology, Government Thiruvarur Medical College, Thiruvarur over a period of 1 year from 1st January 2015 to 31st December 2015. Attention was given to age, sex, laterality, non neoplastic and neoplastic lesions. The biopsy samples were received in our department from Department of General Surgery, Government Thiruvarur Medical College, Thiruvarur, processed by standard procedures using 10% buffered formalin and paraffin technique and stained by Hematoxylin and Eosin[6].

RESULTS

Table 1: Distribution of various lesions in breast

Diagnosis	No. of cases	Percentage (%)
Benign		
Fibroadenoma	48	37.20
Fibrocystic change	25	19.37
Gynaecomastia (male)	17	13.17
Abscess	5	3.87
Lipoma	2	1.55
Tubular adenoma	1	0.77
Benign phyllodestumor	1	0.77
Apocrine adenosis	1	0.77
Malignant		
Infiltrating ductal carcinoma (NOS)	26	20.15
Comedo carcinoma	2	1.55
Intracystic papillary carcinoma	1	0.77

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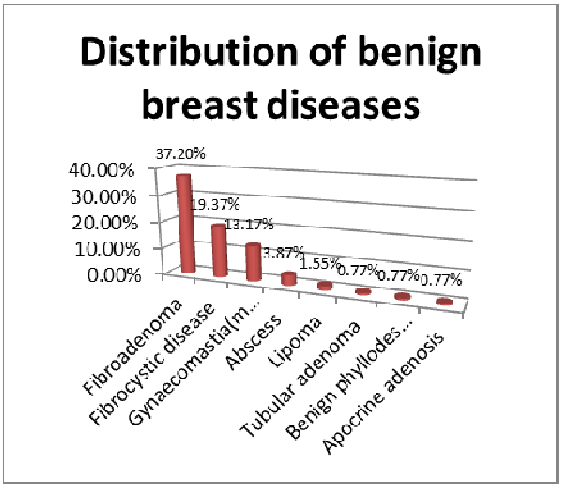

Figure 1

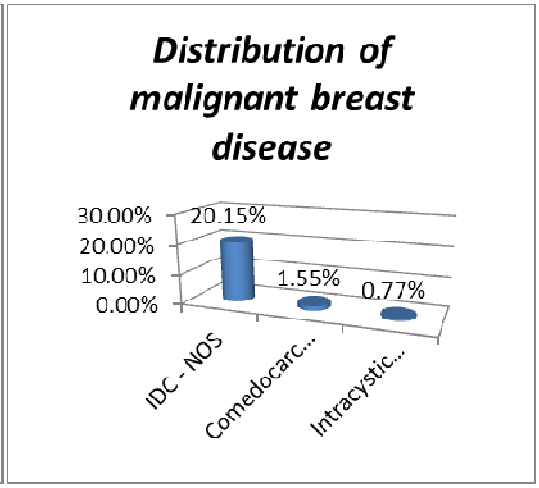

Figure 2

A total of 129 cases were studied over a period of 1 year, of which benign lesion constituted 77.5% of cases where as malignant cases were 22.5%. Of the benign group, fibroadenoma was the commonest lesion encountered in 37.2% of cases, followed by fibrocystic change (19.37%), gynaecomastia (13.17%), abscess (3.87%) and lipoma (1.55%). Tubular adenoma, benign phyllodestumor and apocrine adenosis encountered 0.77% each. Of the malignant group, infiltrating ductal carcinoma – NOS (20.15%) was the commonest lesion followed by comedo carcinoma (1.55%) and intracystic papillary carcinoma (0.77%).

Table 2: Sex wise distribution of breast lesions

Sex	No. of cases	Percentage (%)
Female	112	86.82
Male	17	13.18

In our study, 112 were female (86.82%) and 17 were male (13.18%). All the breast lesions in male were benign lesion (gynaecomastia). Out of 129 patients with breast lesions, 63 (48.83%) had left sided involvement, 58 (44.96%) had right sided involvement whereas 8 (6.20%) had bilateral involvement.

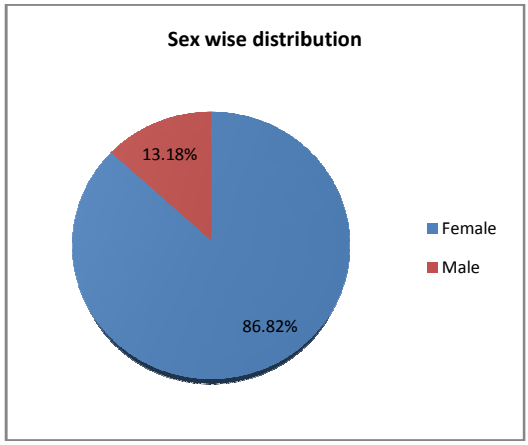

Figure 3

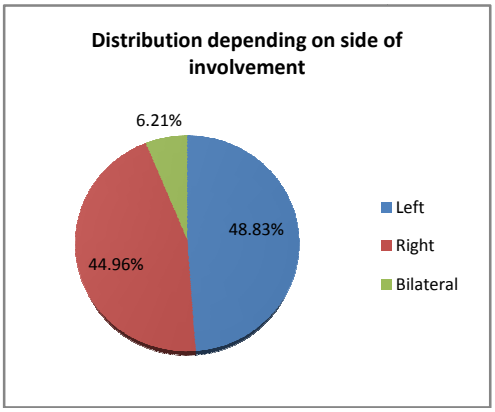

Figure 4

Table 3: Distribution depending on the side of involvement

Side	No. of cases	Percentage (%)
Left	63	48.83
Right	58	44.96
Bilateral	8	6.21

Table 4: Age wise distribution of benign and malignant breast lesions

Age range (yrs)	No. of benign lesions	Percentage of benign lesions (%)	No. of malignant lesions	Percentage of malignant lesions (%)
11 – 20	34	26.35	0	0
21 – 30	26	20.15	0	0
31 – 40	27	20.93	10	7.75
41 – 50	8	6.20	9	6.98
51 – 60	3	2.33	7	5.43
61 – 70	0	0	3	2.33
71 – 80	2	1.55	0	0

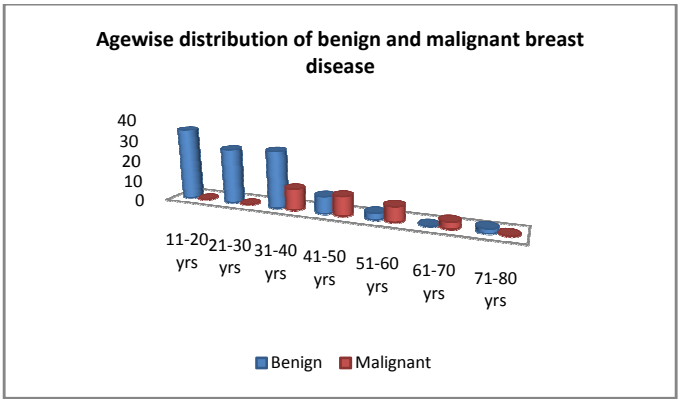

Figure 5

In a total of 129 cases, most of the benign breast lesions were in the second decade which constitute 34 cases (26.35%), followed by 27 cases (20.93%) in fourth decade and 26 cases (20.15%) in the third decade. The malignant breast lesions are commonly encountered in the fourth decade which constitute 10 case (7.75%), followed by 9 cases (6.98%) in fifth decade and 7 cases (5.43%) in the sixth decade and 3 cases (2.33%) in seventh decade.

DISCUSSION

The knowledge about the general features of individual breast diseases like incidence, age distribution, symptoms and clinical findings are important for the diagnosis of breast disease. Benign conditions of breast are significantly more common than malignant conditions in the developing countries[7]. The incidence of these presentations varies in different geographical areas[8]. The treatment for breast diseases in the developing countries is late because of illiteracy, social taboo and unawareness which results in delayed diagnosis of benign as well as malignant neoplasms of breast[9]. In our study, out of 129 cases 77.5% had benign lesions and 22.5% had malignant lesions. Similarly, in Abdul Rasheed et al[7] study 77.77% of cases had benign lesions and 22.22% of cases had malignant lesions. Similar result was obtained by M Kumar et al in 2010[9], 79% had benign lesions and 21% had malignant breast disease. Thus the present study is in concordance with other studies. In the present study, 48.83% of patients had left sided breast involvement, 44.96% had right sided involvement and 6.21% had bilateral involvement. Similarly in Raju et al study[10], left side was involved in 48% of cases, right side in 47% of cases and 5% had bilateral involvement. Whereas in the study conducted by M Kumar et al[9] 47.6% had right sided breast involvement, 39.7% had left side breast involvement and 12.63% had bilateral involvement.

Table 5: Comparison of laterality with other studies

	Present study	Raju et al[10]	M Kumar et al[9]
Left	48.83%	48%	39.7%
Right	44.96%	47%	47.6%
bilateral	6.21%	12.63%	5%

In this study fibroadenoma was the most common benign lesion which constitutes 37.2% of cases, followed by fibrocystic disease in 19.37%, gynaecomastia (male) in 13.17%, abscess in 3.87% and lipoma in 1.55%. Tubular adenoma, benign phyllodestumor and apocrine adenosis each constitute 0.77%. Among the malignant lesions, infiltrating ductal carcinoma – NOS is the commonest which constitute 20.15% of all breast lesions followed by comedocarcinoma in 1.55% and intracystic papillary carcinoma in 0.77%. In Abdul Rasheed et al[7] study, fibroadenoma (55.55%) was the commonest benign breast disease followed by fibrocystic disease (11.11%). Among malignant breast lesions, infiltrating ductal carcinoma (19.44%) was the commonest followed by comedocarcinoma (1.38%). Thus the present study is in concordance with this study. Similarly in studies conducted by M Kumar et al[9], Khanna et al[11], Iyer et al[12] and Mayun et al[13], fibroadenoma was the commonest benign breast lesion which constitute 42.1%, 38.4%, 35.0% and 39.8% respectively.

Table 6: Comparison of incidence of benign and malignant breast diseases with other studies

Diagnosis	Present study	Abdul Rasheed et al [7]
Benign		
Fibroadenoma	37.20	55.55
Fibrocystic change	19.37	11.11
Gynaecomastia (male)	13.17	0
Abscess	3.87	2.77
Lipoma	1.55	0
Tubular adenoma	0.77	0
Benign phyllodestumor	0.77	0
Apocrine adenosis	0.77	0
Malignant		
Infiltrating ductal carcinoma (NOS)	20.15	19.44
Comedo carcinoma	1.55	1.38
Intracystic papillary carcinoma	0.77	0.77

In current study benign lesions are more common in 2nd decade (26.35%) followed by 4th decade (20.93%) and 3rd decade (20.15%). In contrast to this, in study conducted by Ali K Ageep[14], benign lesions are more common in 3rd decade followed by 2nd decade and 4th decade. In present study, malignant lesions are common in 4th decade (7.75%) followed by 5th decade (6.98%), 6th decade (5.43%) and 7th decade (2.33%). Whereas in Ali k Ageep[14] study, malignant lesions are common in 5th decade followed by 6th decade, 7th decade and 4th decade. The variation in the prevalence of disease in different age group may be because of variation in the disease presentation in different geographical areas.

Table 7: Comparison of distribution of breast diseases in various age groups with other study

Age range	Benign		Malignant	
	Present study	Ali K Ageep[14] study	Present study	Ali K Ageep[14] study
< or = 10	0	0.44	0	0
11 – 20	26.35	20.46	0	0.15
21 – 30	20.15	37.16	0	0.58
31 – 40	20.93	16.11	7.75	1.31
41 – 50	6.20	3.77	6.98	5.66
51 – 60	2.33	0.87	5.43	5.52
61 – 70	0	2.47	2.33	2.32
>70	1.55	1.02	0	2.63

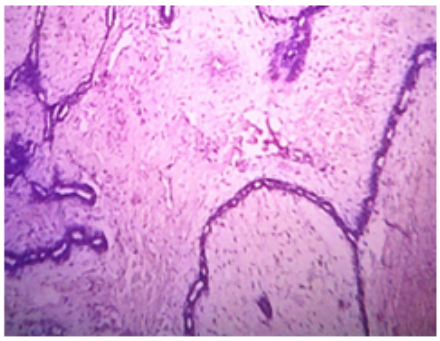

Figure 6

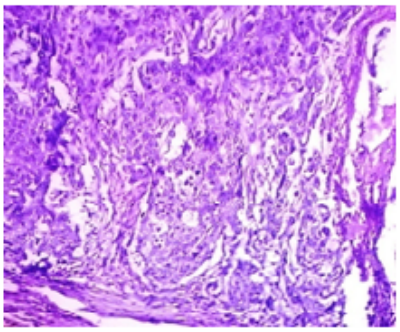

Figure 7

Figure 6: Fibroadenoma – shows compressed ducts with surrounding fibrous stroma
Figure 7: Infiltrating Ductal carcinoma – NOS – shows sheets and nests of pleomorphic cells

CONCLUSION

In our study, benign breast diseases are more common compared to malignant diseases of breast in the ratio of 3.4: 1. The incidence of both benign and malignant breast diseases are becoming common in younger age group now a days, compared to that of earlier period. This may be due to exposure to various environmental pollution and changes in the food habits. Breast self examination and education to females are very important for early diagnosis and treatment of breast diseases.

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