Original Article

Clinicopathological Study of Patients with Non-inflammatory Benign Breast Disease at Combined Military Hospital Chattogram

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Abstract

Introduction: Breast lump is a very common problem among females attending surgical outpatient department. Its development and growth are under the control of various hormones and various physiological statuses like menstruation, pregnancy, lactation and menopause.

Objective: To evaluate the clinicopathological status of patients with non-inflammatory benign breast disease (NIBBD).

Methods: This clinical study was conducted at the department of surgery, Combined Military Hospital (CMH) Chattogram, this study was done during January 2018 to May 2019. Patient presented with breast lump, nipple discharge, sinus and mastalgia in whom histopathology revealed any type of non-malignant BBD were included in the study. Patient treated on outdoor patient basis were excluded and patient with malignant breast lesions or acute breast abscess requiring incision and drainage were excluded from the study.

Results: Majority of the patients, 41(74.5%) had breast lump followed by 10(18.2%) had breast pain, 6(10.9%) had nipple discharge and 3(5.5%) had enlargement of breast. Most of the site was found unilaterally 54(98.2%). Majority of the patients, 27(49.1%) had fibroadenoma, 14(25.5%) had fibrocystic diseases, 10(18.2%) had fibroadenosis, 2(3.6%) had duct ectasia, 1(1.8%) had cystosarcoma Phyllodes and 1(1.8%) had Lipoma.

Conclusion: Maximum age group was 3rd to 4th decade. Most of the patients clinically presented with lumps in the breast followed by pain, enlargement of breast, fever and nipple discharge. Mostly encountered breast lesion was fibroadenoma other common lesion were found fibrocystic diseases, fibroadenosis, duct ectasia, cystosarcomaphyllodes and Lipoma.

Key words: Non inflammatory benign breast disease (NIBBD), Breast lump, Firboadenoma.

Introduction

Breasts or mammary glands in the females can be considered as a distinguishing and unique feature of mammals.[1] Its development and growth are under the control of various hormones and various physiological statuses like menstruation, pregnancy, lactation and menopause.[1] Breast lump is a very common problem among females attending surgical outpatient department. Breast is a dynamic structure which changes throughout the reproductive life and the cyclical changes during menstrual period are also added with it. About 30% of women suffer from breast disease in their lifetime.[2] Benign breast diseases which form the majority of breast diseases constitute a spectrum of lesions ranging from developmental abnormalities, inflammatory lesions, epithelial and stromal proliferations.[3] Benign breast lesions represent a spectrum of disorders that come to clinical attention either as palpable lesions found on physical examination or as imaging abnormalities. Many of these are clinically suspected as malignant lesions but diagnosed as benign after histopathological examination.[4]

Benign breast diseases (BBDs) are a group of breast diseases which are not considered as cancer. They are most common cause of breast problems in females and are more frequent than those of malignant. It is at least 10 times more common as compared to breast cancer in the western countries.[5] BBD constitute a heterogeneous group of breast lesions which include developmental abnormalities, inflammatory and granulomatous lesions, epithelial and stromal proliferations and benign neoplasms.[6] Some of the benign diseases are problematic due to clinical resemblance to breast cancer. Another factor leading to confusion is the use of different forms to describe some disorders namely; fibroadenoma, hyper-plastic cystic disease & hormonal mastopathy, chronic mastitis, etc., due to absence of pathological definitions and also confirmation regarding normal prevalence of developmental, physiological changes.[7] NIBBD is mostly due to abnormal hormonal level. Understanding of aetiology of NIBBD requires endocrine analysis, hormonal estimation with radioimmunoassay may help.

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Materials and Methods

This clinical study was conducted at the department of surgery, CMH Chattogram from January 2018 to May 2019 among 55 patients of 20 to 50 years of age. As per protocol, patients presented with different breast related problems like lump in breast, nipple discharge, associated fever and mastalgia were admitted in surgical ward for evaluation. Patients were clinically examined to record all clinical details. Sonography, mammography and fine needle aspiration cytology was done in selected cases as per need. Patients were posted for surgery as indicated. Final diagnosis was made after histopathological examination of the specimen.

Patient of either sex, presented with breast lump, nipple discharge, sinus, associated fever and mastalgia in whom histopathology revealed any type of non-malignant BBD were included in the study. Patient treated on outdoor patient basis were excluded and patient with malignant breast lesions or acute breast abscess requiring incision and drainage were excluded from the study.

All patients satisfying above criteria were considered for the study. All clinical records were collected, tabulated on Microsoft excel sheet and evaluated for various parameters like age, sex, type of breast disease. Statistical analysis was done using Microsoft excel tools and formulae. Type of clinical presentation, site and quadrant of breast lesion was noted. Further study was done to see menstrual and lactational status of the patient at the time of presentation. Clinical, radiological and histopathological diagnosis was noted. Informations regarding surgical and medical treatment given to the patients were collected and reviewed. Histopathologically cases were classified as benign neoplasms, inflammatory lesions and tumor like lesions. Pure benign neoplasm included fibroadenoma (FA), lactating adenoma, phyllodes tumor and tubular adenoma. Inflammatory lesions included acute mastitis presented as a lump, chronic mastitis clinically labelled as antibioma and tuberculosis of breast. Tumor like lesions included fibrocystic disease (FCD) and gynaecomastia.

Results

Out of 55 patients, majority 21(38.2%) patients belonged to age group 41-50 years with mean age was 33.7±10.4 years. Mean age of menarche was 13.2±1.2 years. Majority 40(72.7%) patients were primiparous. Exclusive breastfeeding was found 25(45.5%), history of contraceptive use was 41(74.5%), past history of breast disease 2(3.6%) and family history of breast disease 3(5.5%) (Table-I).

Table-I: Demographic characteristics of the study patients (n=55)

	Parameters	n	%
Age group (years)	≤20	2	3.6
	21-30	9	16.4
	31-40	18	32.7
	41-50	21	38.2
	>50	5	9.1
	Mean±SD	33.7±10.4	
	Mean age of menarche (years)	13.2±1.2	
Parity	Primiparous	40	72.7
	Mulitparous	15	27.3
Others	**Exclusive breastfeeding**	25	45.5
	History of contraceptive use	41	74.5
	Past history of breast disease	2	3.6
	Family history of breast disease	3	5.5

Majority 41(74.5%) patients had breast lump followed by 10(18.2%) had breast pain, 6(10.9%) had nipple discharge and 3(5.5%) had enlargement of breast (Figure-1).

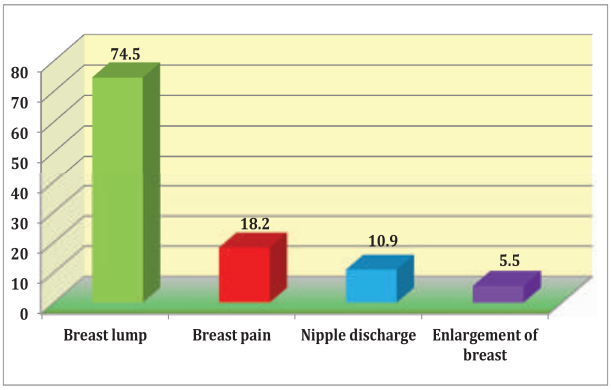

Figure-1: Bar diagram showing sign and symptoms of the study patients (n=55).

Unilateral NIBBD was found in 54(98.2%) and bilateral was 1(1.8%) (Figure-2).

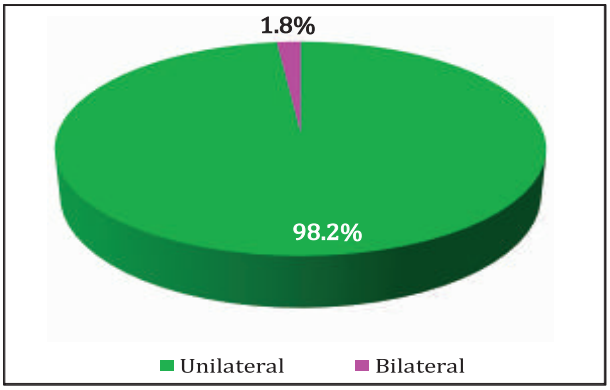

Figure-2: Sides of NIBBD of the study patients (n=55).

Majority 27(49.1%) patients had fibroadenoma, 14(25.5%) had fibrocystic diseases, 10(18.2%) had fibroadenosis, 2(3.6%) had duct ectasia, 1(1.8%) had cystosarcoma Phyllodes and 1(1.8%) had Lipoma (Figure-3).

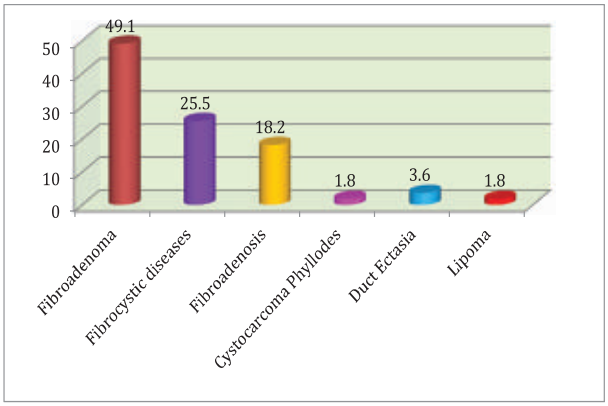

Figure-3: Type of lesions of the study patients (n=55).

Majority 27 patients had fibroadenoma, out of which 9 patients belonged to age group 31-40 years, followed by 14 patients had fibrocystic disease, among them 7 patients belonged to age group 41-50 years and 5 patients belonged to age group 31-40 years. Ten patients fibroadenosis, out of which 4 patients belonged to age group 31-40 year and 3 patients belonged to age group 41-50 years (Table-II).

Table-II: Distribution of type of lesions versus age group (n=55)

Age group (years)	Total	Fibroadenoma	Fibroadenosis	Fibrocystic Diseases	Cystosarcoma Phyllodes	Duct Ectasia	Lipoma
≤20	**2**	2	0	0	0	0	0
21-30	**9**	5	2	2	0	0	0
31-40	**18**	9	4	5	0	0	0
41-50	**21**	7	3	7	1	2	1
>50	**5**	4	1	0	0	0	0
Total	**55**	**27**	**10**	**14**	**1**	**2**	**1**

Discussion

In this study observed that majority 21(38.2%) patients belonged to age group 41-50 years with mean age was 33.7±10.4 years. Mean age of menarche was 13.2±1.2 years. In the Hiremath et al[7] study of 51 cases, most of the NIBBDs are seen in the age group of 21-30 years, 24 in number which makes half of the total cases included for the study. These are usually fibroadenomas. Next is the 10-20 years age group. These are mostly fibroadenoma and 14 in number. Nine cases are included in the age group of 31-40 years; these are fibrocystic disease cases due to the replacement of fibrous tissue, mainly in parous women as there are cyclic changes in the breast. Four cases are seen more than 40 years group mainly fibrocystic disease and cystosarcomaphyllodes. Aslam et al[8] reported the overall mean age of patients with breast lesion was 25.18, SD±11.73 with a wide age range of 12–74 years.

In the Mandal et al[2] study, majority of the patients 64(30.2%) belongs to the 21-30-year age group, the next highest numbers of patients being in the 31-40-year age group stood at 49(23.1%). These findings are similar to those of other reports where patients presenting with benign breast disease were less than 30 years and typically in the 20-25 year age range.[9-12] The reasons for the increase in the incidence of benign breast lesions in this age group is not clear but may be due to some physiological and pathological hormonal effects on the female breast as well as vulnerability to infection among lactating mothers due to poor hygiene.

Majority, 40(72.7%) patients were primiparous. Exclusive breastfeeding was found 25(45.5%), history of contraceptive use was 41(74.5%), past history of breast disease 2(3.6%) and family history of breast disease was 3(5.5%). Chalya et al[3] reported that the median age at menarche was 13 (+ IQR of 9 to 15) years. Nulliparous was found 202(58.4%), 74(21.4%) had been breast feeding. History of contraceptive use was reported in 98 (28.3%). Past history of breast disease was reported in 16(4.6%) patients. Family history of breast disease was positive in 29(8.4%) patients.

In current study observed that majority 41(74.5%) patients had breast lump followed by 10(18.2%) had breast pain, 6(10.9%) had nipple discharge and 3(5.5%) had enlargement of breast. Hiremath et al[7] reported fibroadenoma was found 47.8%, fibroadenosis 10.2%, fibrocystic diseases 15.4%, cystosarcomaphyllodes 11.5%, duct ectasia 1.8% and lipoma 1.8%. Chalya et al[3] reported breast lump was the most frequent presentation in 67.6% of patients followed by breast pain 51(14.7%), nipple discharge only 7(2.0%). Aslam et al[8] most patients came with complaints of lump 202 (79.5%), pain 38(15%) in breast, nipple retraction 0.4% and enlargement 1.2%. In this study unilateral NIBBD was found in 54 (98.2%) and bilateral was 1(1.8%). Jawade and Bande1 observed out of 88 patients only 4 patients (4.5%) had bilateral disease rest were unilateral. Aslam et al[8] found most of cases presented with unilateral lesions 191(75.2%).

In this study observed that majority 27(49.1%) patients had fibroadenoma, 14(25.5%) had fibrocystic disease, 10(18.2%) had fibroadenosis, 2(3.6%) had duct ectasia, 1(1.8%) had cystosarcoma Phyllodes and 1(1.8%) had Lipoma. Jawade and Bande[1] reported fibroadenoma is the most common benign neoplasm seen in 46(52.3%) cases followed by fibrocystic disease seen in 15(17.1%) cases. Aslam et al[8] found fibroadenoma is the most common lesion of benign breast disease 181(71.3%), Phyllodes tumor, the other fibroepithelial tumor 3(1.2%). Chalya et al[3] study, histopathological examination was performed in 295(85.3%) patients. Of these, fibroadenoma

95(60.0%) was the most frequently diagnosed benign breast disease followed by fibrocystic changes in 56(19.0%) patients. Fibroadenoma was the most common benign breast disease in this study. This finding was in agreement with most of the available literature on benign breast diseases.[13-14]

In this study, majority of the patients (27) had fibroadenoma, out of which 9 patients belonged to age group 31-40 years, followed by 14 patients had fibrocystic disease, among them 7 patients belonged to age group 41-50 years and 5 patients belonged to age group 31-40 years. Ten patients fibroadenosis, out of which 4 patients belonged to age group 31-40 year and 3 patients belonged to age group 41-50 years. Mandal et al[2] reported that the various conditions diagnosed, most of the fibroadenoma belongs to the <20-year category being 32(37.20%) total number of fibroadenoma) most of the fibroadenosis belongs to the 21-30 years of categories (50%). Chalya et al[3] reported fibroadenoma was found 6(2.0%) <20 years age group, 152(51.5%) belonged to age group 21-30 years, 4(1.4%) in group 41-50 years. Fibrocystic disease was 13(4.5%) in age group 21-30 years, 25(8.5%) in age group 31-40 years, 10(3.4%) in age group 41-50 years. The peak incidence of fibroadenoma ranged from the 2nd to the 3rd decade of life which was consistent with the findings of other studies[14,15]. The reasons for the high frequency of fibroadenoma among females in this study are not clear. Demographic factors might play a role, considering the large number of young females within the population of these groups. The fibrocystic disease was the second most common condition in our study and a majority of the patients belonged to 3rd and 4th decades. Benign phyllodestumours have been described as rare fibro epithelial tumours that account for about 1% of all breast neoplasms[16]. These patients with benign phyllodes were aged below 20 years of age, similar to findings by Nzegwu et al[17] and Irabo & Okolo[18].

Conclusion

Maximum age group was 3rd to 4th decade. Most of the patients clinically presented with lumps in the breast followed by pain, enlargement of breast and nipple discharge. Mostly encountered breast lesion was fibro-adenoma other common lesions were found fibrocystic diseases, fibroadenosis, duct ectasia, cystosarcomaphyllodes and Lipoma. Patients normally present late with locally advanced diseases, due to lack of awareness and knowledge. Breast cancer and breast disease screening programs should be developed at the hospitals.

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