

Original Article

Different Types of Breast Lump in Relation to Different Age Groups

ABMZ Sadik¹, MM Hasan², HEZA Haque³, FU Ahmed⁴, MZ Kabir⁵

Abstract :

This prospective observational study was carried out in the inpatient and outpatient department of surgery at Shaheed Ziaur Rahman Medical College Hospital, Bogra, during the period of 01.07.2008 to 31.12.2008 with a view to find out the incidence of breast carcinoma, fibroadenoma or other pathology in different age group. A total 130 patients with palpable breast lump were included in the study. Age of the patients was between 11 to 70 years. In most of the patients with breast lump Fine Needle Aspiration Cytology and biopsy were done. Sometimes ultrasonography, mammography and other routine investigations were also done. Among the study population 53.85% had benign lesions, Breast carcinoma accounted for 46.15% cases, fibroadenoma for 40.76% and fibroadenosis were in 10% cases. Fibroadenoma was common in second and third decade, while carcinoma of breast was common in third and fourth decade in this study. Here we attempted to find out the age incidence of breast lump and its correlation with clinical features, FNAC findings and histopathological report to improve the accuracy of diagnosis and management of breast disease.

Key words: Breast lump, fibroadenoma, fibroadenosis, carcinoma, FNAC, excision biopsy.

Introduction :

Breast is a dynamic structure that undergoes changes through a woman's life. Virtually every woman with a breast lump, breast pain or discharge from nipple fears that she has breast-cancer. It is the most common cancer in the women in western world and the most common cause of death in women between 35-55 years¹.

There is a significant variation in the presentation of different lesions of breast in relation to age of the patients. Carcinoma of the breast is extremely rare below the age of 20 years, but thereafter the incidence

1. Dr. ABM Zafar Sadik, MBBS, FCPS (Surgery), Registrar (Surgery), Shaheed Ziaur Rahman Medical College Hospital, Bogra.
2. Dr. Md. Mahmudul Hasan, MBBS, Registrar (Casualty Surgery), Dhaka Medical College Hospital, Dhaka.
3. Dr. Hur-E- Zannat Afroza Haque, MBBS, Medical Officer, Shaheed Ziaur Rahman Medical College Hospital, Bogra.
4. Dr. Farid Uddin Ahmed, MBBS, Medical Officer, Dhaka Medical College Hospital, Dhaka.
5. Dr. Md. Zahidul Kabir, MBBS, D.Ortho, Assistant Registrar (Orthopedics), Shaheed Ziaur Rahman Medical College Hospital, Bogra.

Address of correspondence :

Dr. ABM Zafar Sadik, MBBS, FCPS (Surgery), Registrar (Surgery), Shaheed Ziaur Rahman Medical College Hospital, Bogra.
Mobile No: +8801711968436, Email: zsadik8@yahoo.com

steadily rises, so that by the ages 90 years nearly 20 % of the women are affected². Although in majority of cases a provisional diagnosis can be made on the basis of thorough history taking and careful assessment of physical characteristic but use of orderly sequence of investigation is required in nearly all cases of breast lump to attain a definite diagnosis. Fine needle aspiration cytology (FNAC), ultrasonography, mammography, excision biopsy are important investigations for the diagnosis of breast lump to find out incidence of breast carcinoma, fibroadenoma or other pathology in different age group.

Materials and Methods :

This prospective observational study was carried out in surgical units and outpatient department of Shaheed Ziaur Rahman Medical College Hospital (SZRMCH), Bogra from patients attended with breast lump. All patients irrespective of age and who had definite palpable breast lump & patient or their guardians who agreed to comply were included in this study. Patient with breast abscess were excluded from the study. Informed written consent was taken from the patient.

Detailed history of each patient was recorded with special attention to their age, parity, nursing history, menstrual history, menopausal status, past history of

breast lump, trauma, use of oral contraceptives and history of breast cancer in their family. Important and relevant findings on thorough physical examination were recorded and in all cases relevant investigations were done. FNAC or excision biopsy was done in all cases and ultrasonography in some cases. Other routine investigations were done and necessary advice given for follow up in cases where applicable. Results and observations were tabulated and studied in relation to age.

Results :

The present study was carried out to evaluate different types of breast lump in relation to age groups. The age of the patients ranged from 11 to 70 years. Most patients were in 2nd decade followed by 4th decade (Figure-I).

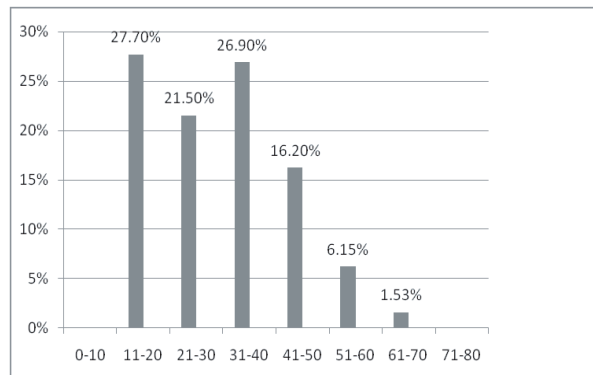


Figure I : Age distribution of different type of breast lump

When considering all the lesions, maximum incidence was in the 2nd decade (36 cases, 27.70%), followed by 4th decade (35 cases, 26.90%). Fibroadenoma was common in 2nd and 3rd decade. Carcinoma of breast was the most common in 4th decade (24 cases, 40%) in this study (Table I).

Table I : Relationship between age distribution & pathological findings of breast lump

Age (years)	Patient (n=130)	Fibro-adenoma (n=53)	Fibro-adenosis (n=13)	Other BBD* (n=4)	Carcinoma (n=60)
11-20	36	35	-	1	-
21-30	28	14	-	2	12
31-40	35	4	7	-	24
41-50	21	-	3	1	17
51-60	8	-	3	-	5
61-70	2	-	-	-	2

*BBD= Benign Breast Disorder

Table-II shows that 31 patients had (cyclical, 21 cases and non-cyclical 10 cases) pain in the breast lump. Total 35 patients (26.9%) presented with nipple retraction and 19 (14.6%) patients had nipple discharge. Lymph node involvement was found in 20 cases (15.4%) and also skin ulceration was found 17 cases (13.1%).

Table II : Clinical presentation of lumps (symptoms/signs)

Symptoms/Signs	Number of patients (%)
Lump in the breast	130 (100)
Pain in the breast	31 (23.8)
cyclical	21 (16.2)
non cyclical	10 (7.7)
Nipple discharge	19 (14.6)
Ulceration in the skin	17 (13.1)
Fever	16 (12.1)
Nipple retraction	35 (26.9)
Lymph node involvement	20 (15.4)

Table-III shows that 49 (38%) cases were clinically diagnosed as fibroadenoma but according to FNAC it was 40 (31%) and according to histopathology it was 36 (28%). Total 20 (16%) cases were clinically diagnosed as fibroadenosis but according to FNAC it was 10 (7.69%) and according to histopathology it was 4 (3.08%) and 42 (32%) cases were clinically diagnosed as breast carcinoma but according to FNAC it was 37 (28.46%) and according to histopathology it was 38 (29.2%).

Table III : Correlation of clinical diagnosis, FNAC findings and histopathological diagnosis of breast lump

Clinical diagnosis	Cases N=130	Case No	FNAC	Case No	Histopathology	Case No
Fibro-adenoma	49	Fibroadenoma	40	Fibroadenoma	36	
		Fibroadenosis	5	Fibroadenosis	6	
		Carcinoma	4	Carcinoma	7	
Fibro-adenosis	20	Fibroadenosis	10	Fibroadenosis	4	
		Fibroadenoma	6	Fibroadenoma	7	
		Carcinoma	4	Carcinoma	9	
Breast carcinoma	42	Carcinoma	37	Carcinoma	38	
		Fibroadenoma	3	Fibroadenoma	3	
		Fibroadenosis	2	Fibroadenosis	1	
No firm clinical diagnosis could be made	19	Fibroadenosis	4	Fibroadenosis	2	
		Fibroadenoma	5	Fibroadenoma	7	
		Chronic inflammation	5	Chronic inflammation	2	
Lipoma	2	Phyllodes	2	Phyllodes	1	
		Lipoma	2	Lipoma	1	
		Carcinoma	1	Carcinoma	6	

Table-IV shows that benign lesions are more common than malignant lesions. Among 130 cases- 70 cases (53.85%) were benign and 60 cases (46.15%) were malignant. Fibroadenoma were the most (40.76%) common benign lesions.

Table IV : Pathological distribution of breast lumps among the 130 patients

Histological type	No of patients (%) (n=130)
A) Benign lesions	70 (53.85)
1) Fibroadenoma	53 (40.76)
2) Fibroadenosis	13 (10)
3) Chronic inflammation	2 (1.54)
4) Phyllodes	1 (0.77)
5) Lipoma	1 (0.77)
B) Malignant lesions	60 (46.15)
Carcinoma	60 (46.15)

Table-V shows that maximum number of patients (45%) 27 cases with carcinoma was presented in stage-II disease, followed by 18 cases (30%) in stage-I disease, 12 cases (20%) in stage-III and 9 cases (15%) in stage-IV disease.

Table V : Presentation of carcinoma breast according to staging

Stage of the disease	Number of cases	Percentage
Stage I	18	30%
Stage II	27	45%
Stage III	12	20%
Stage IV	9	15%

Discussion :

Although benign breast lumps are commoner than malignant tumors but presence of any persistent lump in the breast raises the question of carcinoma, which is the most common malignant tumor of the breast and leading cause of death in women³. Here the commonest age group was 11 to 20 years. Fibroadenoma was found common in the second and third decades. Oluwle and Freeman⁴ have observed that the predominant age incidence in their studies was 11 to 20 years & peak age incidence for Fibroadenoma was between 16 to 25 years, which is consistent with this study.

Three most common lump producing lesions in the breast are fibroadenoma, fibrocystic disease (fibroadenosis) and carcinoma. The relative incidence of these three lesions varies in different studies. Olwale and Freeman⁴ analyzed 255 breast lesions in 282 patients and found fibroadenoma was the most common (34.75%) lesion, and second and third most common lesions were carcinoma and fibrocystic disease comprising 28 and 17 percent respectively. In this

study we have found, out of 130 patients, 70 (53.85%) breast lumps were benign & rest 60 lumps (46.15%) were malignant. Breast carcinoma was the most common lesion accounting for 46.15% (60 lesions) of all; Fibroadenoma was 40.76% (53 lesions) of all lesions. The third most common lesion was fibroadenosis comprising 10% (13 lesions) and other benign breast disease was found in 7 (3.08%) patients Here carcinoma is more common than fibroadenoma as many young girls in our society do not present to doctor timely with their problem, that thinking this problem will resolve spontaneously.

In this study carcinoma of breast was common in 30 to 50 years age group (68%). No carcinoma patient was found below the age of 20 years. There was sharp rise of number of carcinoma up to 50 years of age. Most of the carcinoma patients in this study presented in stage II (45%), but stage I and stages III were also common They are 30% and 20% respectively. The late presentation was due to lack of awareness and lack of screening programs in our population. Illiteracy, poverty, religious superstitions were also responsible for the delayed presentation. As the main problem of breast lump consists in its risk of being malignant, early detection of underlying pathology is a good means for long survival. The probability of developing breast cancer increases with age. As the cost benefit ratio of screening programs to the society, as a whole is unclear, less expensive screening techniques should be implemented and the vulnerable age group should be followed carefully. This will help to improve the survival rate.

Conclusion :

From this study, we can say three most common lump-producing lesions in the breast are fibroadenoma, fibroadenosis and carcinoma. Fibroadenoma occurs mostly in 11 to 20 years age group, where as fibroadenosis is found mostly in late twenties and early thirties and carcinoma was in 30 to 50 years age group. The probability of developing breast cancer increases with age, throughout life. Women who are at greater than normal risk of developing breast cancer, should be identified by proper health education and employing screening program by regular self examination of breast, physical examination by doctors and mammography. Any suspicious lesion must have a cytological diagnosis. Early detection of breast lump, differentiation between benign and malignant lesions and proper treatment has an immense value.

References :

- Russell RCG, Williams NS, Bulstrode CJK. In Bailey and Love's short practice of surgery. 24th ed. London: Arnold; 2004. p. 824-846.
- Coles P, Elwood MJ, Kaplan SD. Incidence rates and risk factors of benign breast neoplasms. Am J Epidemiol. 1978; 108:112-20.
- Nigro DM, Organ CH. Fibroadenoma of female breast, some epidemiological surprise. Postrad Med. 1986; 59:113-7.
- Oluwale SF, Freeman HP. Analysis of benign breast lesions in blacks. Am J surg. 1979; 137:786-9.